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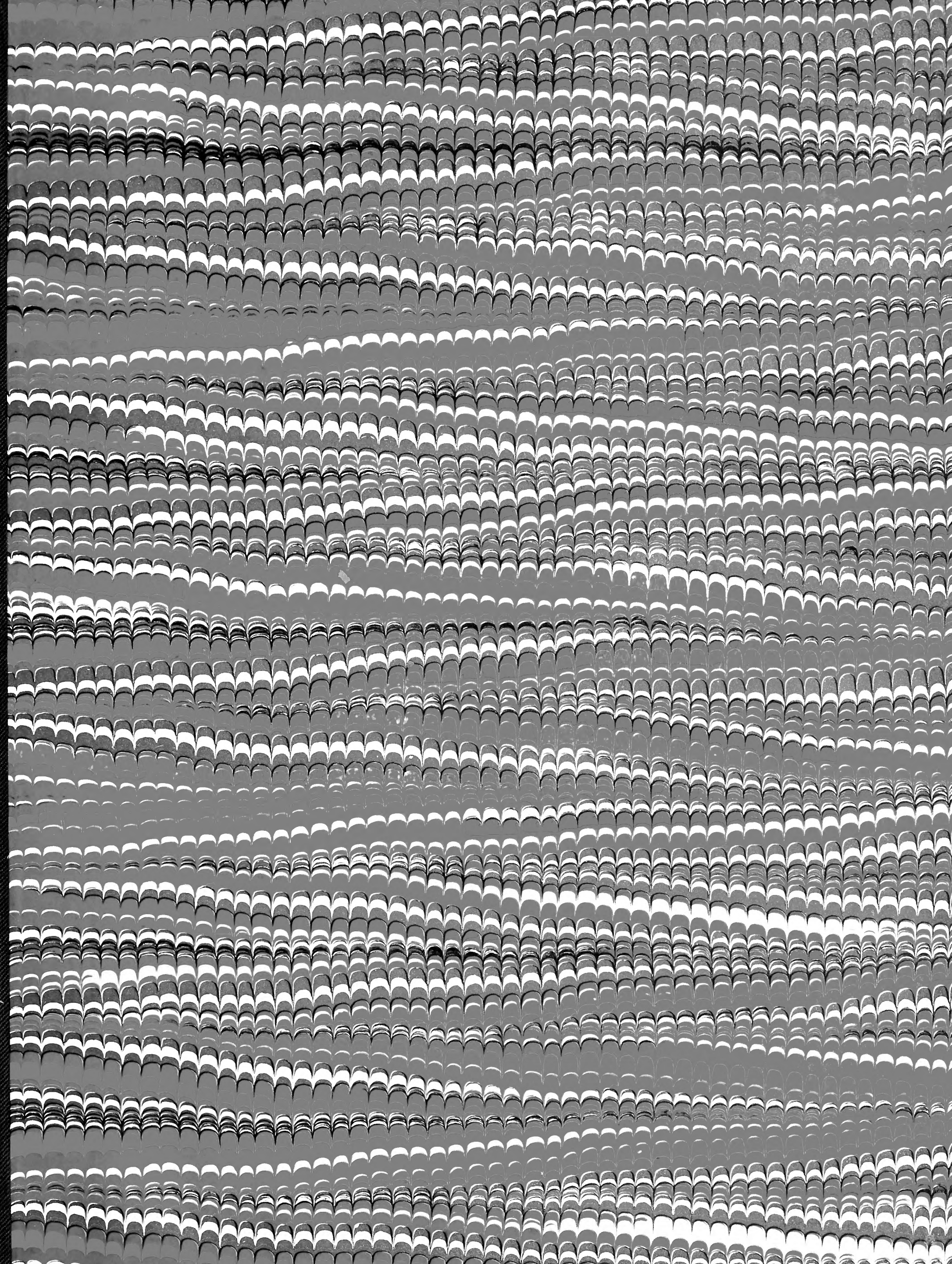
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THE NATIONAL NURSERYMAN



JANUARY, 1911

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

The Monroe Nursery

Established 1847.

OFFER A GENERAL LINE OF

Choice Nursery Stock

PEACH, STD. PEAR,
PLUM, CHERRY, Etc.

I. E. Ilgenfritz' Sons Co.

MONROE, MICH.

Mount Arbor Nurseries

E. S. WELCH, Proprietor

Shenandoah, Iowa

Make a Specialty of a Full Line of
General Nursery Stock for the
Wholesale Trade

WE ARE STRONG ON

APPLE—Light Grades

CHERRY—sour varieties. EUROPEAN PLUM

CURRENTS—red varieties. CONCORD GRAPE

APPLE SEEDLINGS—No. 1 branched

AMERICAN ELM SEEDLINGS

HYBRID PERPETUAL ROSES

CALIFORNIA PRIVET

SPRING TRADE LIST ready February 1st

EVERGREENS

OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI

by the thousand.

Andorra Nurseries,

WM. WARNER HARPER, Prop.

CHESTNUT HILL, PHILA., PA.

JEWELL MINNESOTA GROWN

NURSERY STOCK

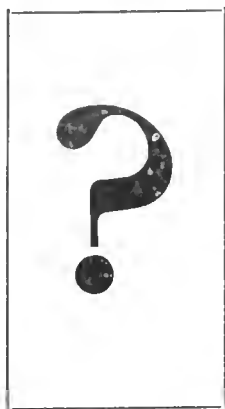
Complete assortment of Fruit and Ornamental stock in all
varieties suited to northern culture. A specialty of Hardy
Shade Trees, Windbreak Stock, Evergreens (Coniferous)
Deciduous Shrubs, Apples and Native Plums

The Jewell Nursery Co.

LAKE CITY, MINNESOTA

1600 Acres

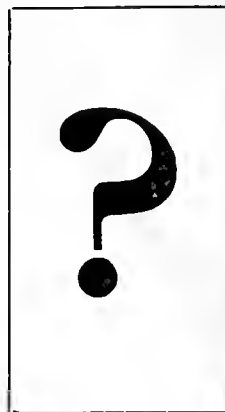
Established 1868



You should have special price list of

SCHAM, VAN TOL

BOSKOOP, HOLLAND



quoting on full line of commercial Boskoop grown stock

BOXWOOD, RHODODENDRONS, ROSES, HYDRANGEAS, MAGNOLIAS, EVERGREENS, Etc.

Messrs. Scham, Van Tol are headquarters for all Boskoop grown nursery stock, carefully selected—well graded and packed. Write for special catalogue price list.

FOR SPRING SHIPMENT

OUDENBOSCH NURSERY STOCK. Norway and Schwedler Maples, Tiliacs, Chestnuts, Thorns, Elms, Evergreens, Etc.

FRENCH ORNAMENTALS. (1000 varieties). Evergreens, (200 varieties) all suitable for lining out.

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BAY TREES. Pyramids, Columns, Standards, high and short stems and all other shapes from Belgium.

HERBACEOUS AND PERENNIAL STOCK. From Royal Tottenham Nurseries, Deedemsvaart, Holland.

RAFFIA. RED STAR BRAND and three other grades from stock at New York. (Bale lots only).

ENGLISH Gooseberries, Whinham Industry, etc. Trained Fruit Trees, etc.

SHIPPING. We have our own Custom House Department. Shipping connections at Havre, Antwerp, Rotterdam, Southampton, Hamburg, etc. Lowest rates consistent with perishable nature of stock.

McHUTCHISON & CO., 17 Murray St., New York City

The Farmers Nursery Company

TROY,

OHIO

OFFER

APPLE, assorted, heavy in light grades

PEAR, Standard, assorted, extra fine lot of Kieffer

CHERRY, 2 year, the finest stock we have ever grown

PLUM, Japan and English, good assortment of varieties

PEACH, choice stock in all grades

EVERGREENS

ARBOR VITAE, 2 to 8 ft.

NORWAY SPRUCE, 2 to 8 ft.

ARBOR VITAE, 2 to 4 ft.

BALSAM FIR, 2 to 5 ft.

These evergreens have been transplanted, and are fine specimen plants. Can supply in carload lots

Silver Maple, Am. Elm, C. L. W. Birch, all sizes
Catalpa Bungei, 3 year heads

Catalpa Spec. Seedlings, all grades. Golden Willow 2 year plants

Stock grown at Dansville, N. Y. and Troy, O.

FOREST TREES FRUIT STOCKS

and BRIARS. Millions in Stock

Seedlings and transplanted. All healthy, stout and well rooted stuff, very cheap. . .

Best shipping facilities via Hamburg at special freight rates.

Catalogues and Forest Planter's Guide free on application.

J. HEINS' SONS

By special appointment to the Court

Imperial and Royal

Largest Nursery in the World

**Shipments of over 160 millions of
Plants annually**

**HALSTENBEK, No. 152,
Near Hamburg, Germany**

NURSERYMEN AND FLORISTS

looking for stock can find largest assortment in the
United States at the

Painesville Nurseries

Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
Plants, Grapes, Gooseberries, Small Fruits, Bulbs, Seeds, Palms
and other tender Greenhouse Plants

Have a large stock stored in frost proof cellars that can be shipped at any time desired;
switch from N. Y. C. lines direct into our packing house; can load without exposure.
Unsurpassed facilities for handling orders large or small. Catalogs and price lists free.

A few specials while they last:

STANDARD PEARS in assortment DUCHESSE DWARF PEARS BOURGEAT QUINCE
PRUNUS PISSARDI and TRILOBA CUTHBERT AND OTHER RASPBERRIES
CONCORD AND OTHER GRAPES

OUR SPECIALTIES ARE

ROSES

H. P.

Moss

Ramblers

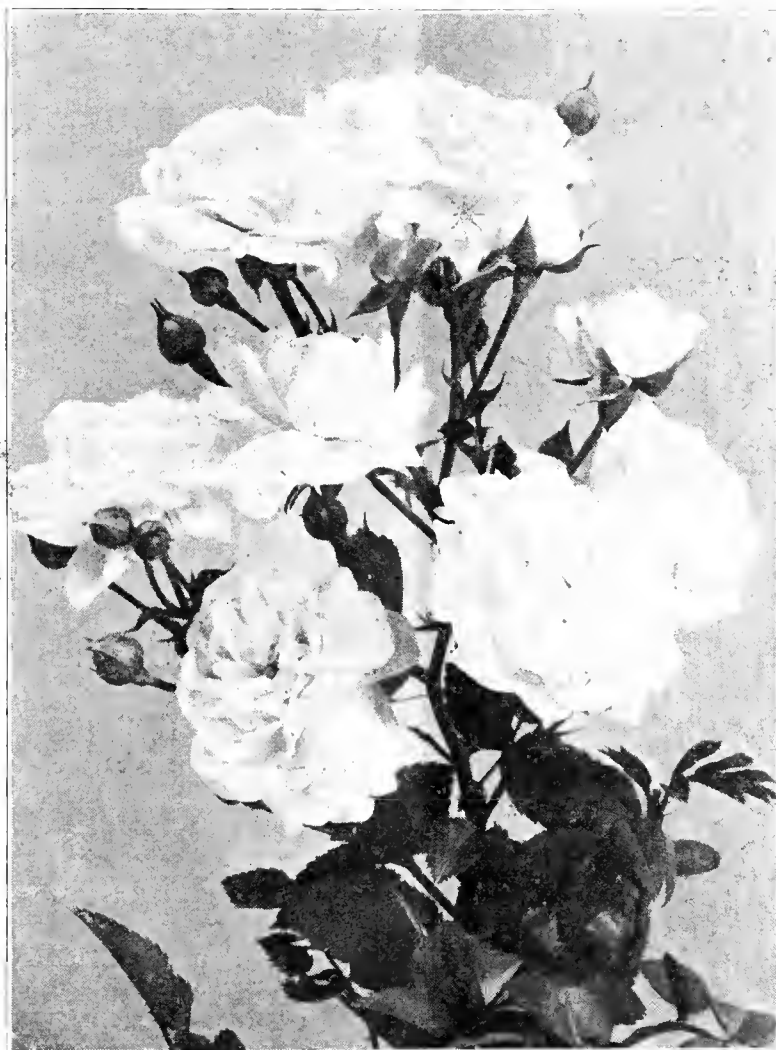
Climbers, Etc.

PEACHES

PEARS

PLUMS

CHERRIES



HYBRID WICHURIANA ROSE DEBUTANTE

Ornamental

Trees and

Shrubs in

Car Lots

Weeping Mulberries
Elm and Ash

Clematis

Ampelopsis

Paeonies

Hydrangeas, Bush
and Tree

Perennial Plants

NO TROUBLE TO PRICE YOUR LIST OF WANTS

55 Years

1200 Acres

44 Greenhouses

THE STORRS & HARRISON CO.

PAINESVILLE, OHIO

A BLUE ROSE

The Greatest Rose Novelty of the Century

It flowered with us this season and
was greatly admired

The New Rambler (Violet Blue), hailed by the German rose growers as the forerunner of a genuinely cornflower blue rose, is a seedling of Crimson Rambler, very vigorous and hardy, and full blooming.

SEND FOR DESCRIPTION AND PRICE

Ellwanger & Barry

MOUNT HOPE NURSERIES
ROCHESTER, N. Y.

Jackson & Perkins Co.

NEWARK, NEW YORK

Wish all their friends

A HAPPY AND PROSPEROUS
NEW YEAR

♦ ♦

Next New Year may be made happier still and more prosperous yet, by using the "J & P. Preferred Stock." Start the year right by asking for January 1911 Bulletin—ready the fifteenth—showing varieties, sizes, prices and quantities.

January first

SPECIAL NOTICE

APPLE QUINCE PEAR CHERRY
PEACH PLUM

A Fine Block of
Own Root Roses

ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
EVERGREENS PEONIES PHLOX
PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

Write for our Special Prices

Special Attention given to Dealers, complete lists
and carload lots.

W. & T. SMITH COMPANY

GENEVA, N. Y.

63 Years

700 Acres

Azalea Indica
(Home-Grown)

Berberis Japonica

Magnolia Grandi-
flora

Yucca Treculeana

Biota Aurea Nana

Field-Grown
Roses

Write for Prices
and Information



Get Some of This Stock For Your 1911 Trade NOW

We have a considerable stock of the trees and shrubs mentioned above, and offer them to the 1911 trade at reasonable prices. This is all clean, first-class stock, and will be sure to please your trade in every way.

Our location offers a distinct advantage, in that we can grow stock here which succeeds admirably both north and south of us. The above varieties are such as will transplant readily and thrive for your customers, almost regardless of location, after the splendid start which they get in this warm and genial climate. We have thousands of satisfied customers in nearly all parts of the country.

We grow a full stock of Ornamentals, Fruits and Nuts, and invite inquiries from the trade relative to particulars on anything in which they are interested.

P. J. Berckmans Co., Inc., Fruitland Nurseries
Augusta, Georgia

Established 1856

Over 450 Acres in Nurseries

CHERRY OFFER

WE offer the trade, in car lots f. o. b. Huntsville, Ala., 75,000 2-yr. cherry, Alabama grown, made up of the following varieties:

Black Tartarian	Dyehouse
Montmorencies	Napoleon
Early Richmond	Suda
Ger. Ostheimer	Windsor
Governor Wood	Wragg

also extra fine 1-yr. and 2-yr. cherry Louisiana and Dansville grown. Special price on car-lots.

Quotations will be promptly submitted on application. Quick action is suggested.

Stark Bro's Nurseries & Orchards Co.

General Nurserymen

Louisiana, Missouri U. S. A.

We offer for

Fall and Spring, 1910-11

A LARGE STOCK OF

Hamamelis Virginica	Hornbeam
Silver Poplar	Black Locust
Tulip Poplars	American Persimmon
Carolina Poplars	Box Elder
Sweet Gum	Viburnum Prunifolium
Ozier Dogwood	Japan Walnuts
Catalpas	Balm of Gilead
Black and White Walnuts	Laurus Benzoin

(SHRUBS)

500 M California Privet	Weigelas
Calycanthus	Kudzu Vine
Deutzias	Ampelopsis Quinquefolia
Spireas	Honeysuckle Upright White

Wistaria, all kinds.

We offer a good assortment of Shrubs and a nice Collection of Ornamentals

We have several million Hardwood Cuttings, California Privet, Spireas, Etc.

Send for Trade Price List. Address

Forest Nursery & Seed Co.
McMinnville, Tenn.

Alma Nurseries

OUDENBOSCH - HOLLAND

Where the Choicest of Ornamental Trees and Shrubs are grown.

NORWAY MAPLES

In all sizes from young whips to large trees

EVERGREENS

In all varieties and sizes, such as

Koster's Blue Spruces, Mugho and Cembra Pines, Junipers, Retinosporas, Etc.

Schwedler Maples	Red and White Flowering Horse-chestnut
Purple Birches	
Elms, Lindens	Rivers' Purple and Copper Beeches
Oriental Planes	Pin, Red and Golden Oaks
Paul's Scarlet Hawthorn and others	
Roses, Rhododendrons,	Pendulous Trees, Shrubs, Etc.
Box, Azalias	

Write at once to our American Agent:

LEONARD OORTHUYNS,
POUGHKEEPSIE, N. Y.

or for the states of Cal., Ore., and Wash., to

J. MEERKAMP VAN EMBDEN,
THORNTON, San Joaquin Co., CAL.

Franklin Davis Nursery Co.

BALTIMORE, MD.

We offer for FALL 1910 and
SPRING 1911

APPLE 1 and 2 year; heavy on York Imperial, Stayman's Winesap, Blacktwig, Grimes Golden, and other standard varieties.

PEAR, STANDARD, Kieffer, 2 and 3 year, and other leading kinds.

PEACH; Expect our Peach to be fine; we have a heavy stock and will book orders for several carloads now. Peach are bound to advance. We are heavy on Elberta, Carmen Crawford's Late, Old Mixon Free, Stump, Beer's Smock, etc., etc.

ASPARAGUS, 1 and 2 year; Palmetto, Barr's, Conover's Giant.

CHERRY, 2 yr. leading varieties.

PRIVET, 1 and 2 year, a fine lot of heavy No. 1 plants.

POPLARS, a fine lot of Carolina and Lombardy in all sizes, by the carload.

PLANES, a fine lot of Oriental Planes in all sizes.

CATALPA SPECIOSA, several thousand at a low price.

ELMS, AMERICAN; Several hundred nice trees.

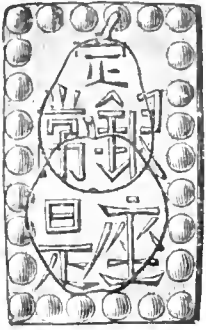
WALNUTS, JAPAN, in all sizes.

Extra large bushy SHRUBS, such as Altheas, Weigelas, Spireas, Deutzias, Snowballs, Judas, Hydrangea, P. G.

Extra large SUGAR MAPLES several hundred 3 to 3 1-2 and 4 to 4 1-2 inches, fine trees, with good heads and straight bodies.

We also have a general line of other stock. Send us your want list.

Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries
Huntsville, Ala.

JESSIE S. MOSS, Prop.

We offer for Fall of 1910 and Spring of 1911 in large quantities as usual:

SPECIALTIES

APPLES—Commercial varieties, one year, in large supply. As fine in quality as ever grown.

PEARS—Kieffers, one and two years old. A much smaller crop than heretofore.

CHERRIES—On Mazzard. One year. Bing, Lambert, Napoleon, Black Tartarian.

CHERRIES—On Mahaleb. One and two years. Ea. Richmond, Dyehouse, Montmorency, Wragg, Royal Duke, in small supply.

PEACHES—We excel in Peaches, and of these we will have as fine a stock as we have ever grown, both in one year and June Buds.

ROSES—Budded. We will have a large and fine stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.

PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.

MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

See Price List for particulars.

Address, W. F. HEIKES, Manager,
HUNTSVILLE, ALA.

Have you seen and examined the quality and finish of our

Rawhide Brand of Shipping Tags and Tree Labels

printed or plain, strung or wired?



This stock is especially adapted to the most severe usage, being thoroughly waterproof & weather-proof. "Once used, always used."

Send for samples and prices. Our reference are the largest nursery men in the United States.

The Denney Tag Co.

WEST CHESTER, PENNSYLVANIA

New Prices for 1911 on Red Star Brand Raffia are now ready

We have just arranged our new prices for 1911 on Red Star Brand Raffia and we want all users of Raffia to send for our price list. The prices this year on bale lots and up have been reduced. We have prices that will interest you and quality that will satisfy you.

We are direct importers of Red Star Brand Raffia and we are proud of this brand. It has a record and a standard second to none. It is of high grade quality and every pound is guaranteed. It has the largest sale of any other brand on the market and the majority of the most conservative nurserymen use it. To have this distinction it must be worthy. These facts should interest you to consider Red Star Brand when in need of Raffia. It will pay you to let us quote on your next supply. Tell us what quantity you can use. We will give you our prices and send samples without charge.

Thomas Meehan & Sons

DRESHER

PENNSYLVANIA

BOBBINK & ATKINS

WORLD'S CHOICEST NURSERY PRODUCTS

- | | |
|---|--|
| ROSES, in all kinds and varieties | PALMS and BAY TREES by the thousands |
| EVERGREENS and CONIFERS, in several hundred kinds and varieties | Pot-grown FORCING PLANTS, Autumn Delivery |
| RHODODENDRONS, Hardy, ENGLISH HYBRIDS, Maximum and Catawbiense | FRUIT-TREES, home-grown, imported, DWARF and TRAINED |
| BOXWOOD, in all shapes, forms and sizes | SMALL FRUIT, in all kinds and varieties |
| HARDY AZALEAS, in all varieties and colors | NUT TREES, profitable kinds |
| FLOWERING SHRUBS, in bush and standard forms in hundreds of kinds and varieties | OLD-FASHIONED, Hardy FLOWERING PLANTS, in thousands of kinds and varieties |
| JAPANESE MAPLE, in all colors and varieties | PAEONIAS, IRIS, PHLOX, FERNs, HARDY GRASS |
| SHADE TREES, in hundreds of useful and attractive varieties | KITCHEN HERBS and ROOTS |
| MAGNOLIAS and other FLOWERING TREES | RUTHERFORD PARK LAWN GRASS SEED |
| WEeping and STANDARD TREES, in many varieties | AUTUMN BULBS, Dutch, French and Japanese kinds |
| HEDGE PLANTS, in all popular kinds | Interior and Exterior DECORATIVE PLANTS, in large variety |
| HARDY TRAILING VINES and CLIMBERS | VISITORS to our nurseries are always welcome |
| HARDY VINES and CLIMBERS in pots | ASK FOR WHOLESALE CATALOG |
| SPRING and SUMMER FLOWERING BULBS, ROOTS and PLANTS | |

Nurserymen, Florists and Planters
RUTHERFORD, N. J.

NOW-

—Today, you'll write a letter—
if you have nursery stock
to sell this spring—to The
McFarland Organizations,
Harrisburg, Pa.! No matter
what you need to sell the stuff
—advertising, booklets, cata-
logues, engravings, “follow-ups”
or photographs—that's the place
to get material which will turn
your stock into good dollars.
Just say what you want to
sell, how much of it you have,
and how you have tried to sell
it heretofore,—*if* you have.
That's all!

John Palmer & Son, Ltd.

The Nurseries
ANNAN, SCOTLAND

Offer for Fall and Spring Delivery

HORSE CHESTNUTS—Stout transplanted stock 1½ to 2 feet; 2 to 3 feet and 3 to 4 feet.

NORWAY MAPLES—Stout transplanted stock 2½ to 3½ feet and 3 to 4 feet.

SCOTCH ELM for stocks—2½ to 3½ feet; 3 to 4 feet and 4 to 5 feet.

NORWAY SPRUCE FIRS—Carefully transplanted, 6 to 9 inches; 9 to 12 inches and 12 to 18 inches.

NAMED HYBRID RHODODENDRONS—extra bushy, 15 to 18 inches and 1½ to 2 feet.

Lowest prices on application to

John Palmer & Son, Ltd.

The Nurseries
ANNAN, SCOTLAND

Waxahachie Nursery Company

J. R. MAYHEW, President

Offers the trade a **Fine Block** of 2-year old apple, standard sorts.

CHERRY, 1 and 2-year, all grades. **Special Prices** on ear load of Cherry.

PEACH, 1-year and June buds. Surplus largely in heavy grades.

APRICOT and **PLUM**, a small surplus in heavy grades.

CALIFORNIA PRIVET, 30,000 1 to 2 ft.; 50,000 2 to 3 ft.; 40,000 3 to 4 ft.

CATALPA and **BLACK LOCUST** Seedlings all grades.

EVERGREENS, ROSES, SHADE TREES, ETC.
GRAPE, BLACKBERRY, DEWBERRY

OUR SURPLUS IS FOR SALE. LET US QUOTE YOU

Waxahachie Nursery Company

WAXAHACHIE, TEXAS.

Cyclopedia of American Horticulture

L. H. BAILEY

IN FOUR VOLUMES

The NATIONAL NURSERYMAN has made special arrangements with the publishers of this great work and now offers it to Nurserymen on *special easy monthly terms*, \$2.00 per month for ten months. The work shipped by express prepaid on receipt of first installment and coupon below filled out.

Practical instructions on every subject connected with Horticulture. Four handsome quarto volumes; 2,800 original engravings, 50 full plates; 2,016 pages and 4,357 articles; Total plants accounted for 24,434.

Fill out this coupon and mail with first payment:

SPECIAL ORDER BLANK.

National Nurseryman,
Rochester, N. Y.

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Please enter my name as a subscriber for the new CYCLOPEDIA OF AMERICAN HORTICULTURE to be sent to me, charges prepaid, complete in four illustrated volumes, bound in green cloth. I inclose \$2 and agree to pay \$2 monthly for nine months after delivery until \$20 is paid.

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NOTE:—Send Money by Check or Post Office Money Order.

THE NATIONAL NURSERYMAN

218 Livingston Building

Rochester, N. Y.

FRUIT TREES

(ENGLISH GROWN)

OVER HALF A MILLION
TO SELECT FROM

APPLES: Maidens, Bushes and half-Standards are a leading feature with us. 250,000 in stock.

PLUMS AND PEARS. Enormous stock in leading kinds.

CHERRIES, Peaches, Nectarines and Apricots in heavy quantities.

Fruit Trees are our leading line.

Inspection invited to nurserymen visiting England. Our nurseries are only ten miles by rail from London.

List of varieties grown and quotations sent on application. We have no agents. Write direct to

S. SPOONER & SONS

Fruit Tree Growers and Nurserymen

HOUNSLOW, ENGLAND



This tree is a seedling English Walnut (*Juglans regia*) grown by the late Norman Pomeroy of Lockport, N. Y. on a farm now owned by his son, A. C. Pomeroy. The original trees were grown from nuts brought by Mr. Pomeroy the elder, from the Centennial Exposition in 1876. The present owner is conducting an important piece of work in nut improvement by seedling selection with much success.

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XIX.

ROCHESTER, N. Y., JANUARY, 1911

No. 1

A SYMPOSIUM ON NURSERYMEN'S IMPLEMENTS

Experiences in the Use of Labor-Saving Devices Recent Improvements

The following note was sent to representative nurserymen in different parts of the country with a view of getting a line on the present status of labor saving machinery, and nursery practice. "Will you be kind enough to assist in an interchange of experience on recent advance in kind and type of field implements designed for nursery operations directly or indirectly?" Then followed the series of questions given below. The answers are interesting and instructive. A summary or digest of these will be presented in the next issue of the NATIONAL NURSERYMAN.

THE BEST OF THE OLDER IMPLEMENTS

What implements among the older types are you continuing to have most satisfaction in using?

Planet Jr. five-tooth cultivator with attachments, also one-horse plow.—Bechtel Pecan Nurseries, Ocean Springs, Miss.

Four and six-shovel cultivators; surface cultivators.—E. P. Bernardin, Parsons, Kansas.

Two-horse Planet Jr., sulky two-row cultivators.—Brown Brothers Co., Browns' Nurseries, Ontario.

Fourteen-inch turning plows, harrows, disks, drags, Jumbo cultivators for large trees and Jennie Linn for the smaller.—Des Moines Nursery Co., Des Moines, Iowa.

One-horse walking cultivator and small bar shear cotton plow.—J. G. Harrison & Sons, Berlin, Md.

One-horse cultivator.—J. Van Lindley Nursery Co., Pomona, N. C.

Planet cultivators, Acme harrow, Fiegley tree digger, chilled steel plows, in sandy land. Broad (3-in.) solid steel dibbles, Ames full-strapped nursery spades, Wiss pruning shear.—T. V. Munson & Son, Denison, Texas.

Bragg tree digger, also a side digger on small trees and shrubbery.—W. N. Scarff, New Carlisle, O.

Planet Jr. two-horse riding cultivators.—Smith Brothers, Concord, Ga.

Planet Junior and John Deer.—Carl Sonderregger, Beatrice, Nebr.

Daisy or spring tooth two-horse cultivator.—L. R. Taylor & Sons, Topeka, Kansas.

The trencher, used in making furrow for planting grafts, cuttings, strawberries, etc.—Wedge Nursery, Albert Lea, Minn.

Bragg tree digger, disk cultivators, disk harrows, low, flat wagons, pruning shears, and potato hooks, in early weeding of grafts, seedlings, etc.—Whiting Nursery Co., Yankton, S. D.



Gathering nuts from a Pomeroy Walnut near Lockport, N. Y.

THE BEST OF THE NEWER IMPLEMENTS

What labor-saving implements among the newer kinds do you find especially useful in your soil?

Ilgenfritz trencher and firmer. Reed graft wrapping machine and Perfection planter. Barnes Bros. Nursery Co., Yalesville, Conn.

Cutaway disk double action.—Bechtel Pecan Nurseries, Ocean Springs, Miss.

The opener for planting.—E. P. Bernardin, Parsons, Kansas.

Tongueless harrow, peach pit planter.—Brown Brothers Co., Browns Nurseries, Ontario.

Side drill two-horse cultivator attached—fertilize at same time.—J. G. Harrison & Sons, Berlin, Md.

Trenchers and firmers.—Hoopes Bro. & Thomas Co., West Chester, Pa.

Stark digger, Ilgenfritz opener and firmer, Hallock weeder.—J. Van Lindley Nursery Co., Pomona, N. C.

Whitney tree digger, Stark digger.—F. W. Meneray, Council Bluffs, Iowa.

Hazeltine hand-weeders.—T. V. Munson & Son, Denison, Texas.

Transplanter for putting out small fruit plants.—W. N. Scarff, New Carlisle, O.

Four row beet cultivator.—Carl Sonderregger, Beatrice, Nebr.

Opener and presser for planting grafts and budding stock.—L. R. Taylor & Sons, Topcka, Kansas.

A modified form of the Stark graft winder—Wedge Nursery, Albert Lea, Minn.

The trencher and packer for stocks and cuttings is very satisfactory (Clinton Falls Nursery Co.), and we want to add the auto truck for heavy hauling next year.—Whiting Nursery Co., Yankton, S. D.

THE SUBSOILER AND TREE DIGGER

Do you use a subsoiler? What type?

No.—Barnes Bros. Nursery Co., Yalesville, Conn.

No.—Bechtel Pecan Nurseries, Ocean Springs, Miss.

No.—E. P. Bernardin, Parsons, Kansas.

No.—Brown Brothers Co., Browns Nurseries, Ontario.

No.—Des Moines Nursery Co., Des Moines, Iowa.

Yes. Horse, western make.—J. G. Harrison & Sons, Berlin, Md.

No.—Hoopes Bro. & Thomas Co., West Chester, Pa.

Yes. Oliver.—J. Van Lindley Nursery Co., Pomona, N. C.

In our soil a subsoiler is unnecessary.—F. W. Meneray, Council Bluffs, Iowa.

The tree digger, Fiegley. Power tree-balers are rapid, but bruise stock badly.—T. V. Munson & Son, Denison, Texas.

No.—W. N. Scarff, New Carlisle, O.

No.—Smith Brothers, Concord, Ga.

No.—Carl Sonderregger, Beatrice, Nebr.

No.—L. R. Taylor & Sons, Topeka, Kansas.

Our soil is too light to need subsoiling.—Wedge Nursery, Albert Lea, Minn.

No, do not need it in our soil.—Whiting Nursery Co., Yankton, S. D.

WHAT OF THE TREE STRIPPER?

Do you find tree strippers practical machines?

We have never used one.—Barnes' Bros. Nursery Co., Yalesville, Conn.

Have no use for them.—Bay State Nurseries, N. Abington, Mass.

Never tried one.—Bechtel Pecan Nurseries, Ocean Springs, Miss.

Never used one.—E. P. Bernardin, Parsons, Kansas.

We find the power stripper a great help and applicable to almost all stocks. Roses, we think, can be better done by hand, as there is some tendency to bruise.—Brown Bros. Nursery Co., Browns Nurseries, Ontario.

We have had no practical experience with stripping machines.—Des Moines Nursery Co., Des Moines, Iowa.

Not being used, but it is O. K., and will do the work on large orders.—J. G. Harrison & Sons, Berlin, Md.

No good.—J. Van Lindley Nursery Co., Pomona, N. C.

The tree stripper is very practical for some classes of stock, especially seedlings, light trees, gooseberries, and spiræas, etc.—F. W. Meneray, Council Bluffs, Iowa.

Have not tried them. Think digging trees with leaves on radically injurious, and leaf-strippers bruise buds to death.—T. V. Munson & Son, Denison, Texas.

We do not use a tree stripper.—W. N. Scarff, New Carlisle, O.

Never tried them.—Smith Brothers, Concord, Ga.

Never tried them.—Carl Sonderregger, Beatrice, Nebr.

We do not use a tree stripping machine.—L. R. Taylor & Sons, Topeka, Kansas.

Have used none, but have good opinion of them.—Wedge Nursery, Albert Lea, Minn.

Have not used any.—Whiting Nursery Co., Yankton, S. D.

THE BEST NURSERY SPRAYER

What kind of nursery spray outfit do you use?

Knapsack pump.—Barnes Bros. Nursery Co., Yalesville, Conn.

Niagara gas sprayer.—Bay State Nurseries, N. Abington, Mass.

Knapsack (compressed air auto sprayer).—Bechtel Pecan Nurseries, Ocean Springs, Miss.

Have no use for one in our locality.—E. P. Bernardin, Parsons, Kansas.

Power sprayer.—Brown Brothers Co., Browns Nurseries, Ont.

All there are made and looking for later and better ones. The gasoline engine attachment is best yet.—J. G. Harrison & Sons, Berlin, Md.

Niagara gas.—Hoopes Bro. & Thomas Co., West Chester, Pa.

Friend and Bean.—J. Van Lindley Nursery Co., Pomona, N. C.

Weber spraying outfit.—F. W. Meneray, Council Bluffs, Iowa.

Most excellent, the Auto Sprayer, made by E. C. Brown Co., Rochester, N. Y., two-horse, both for nursery and vineyard.—T. V. Munson & Son, Denison, Texas.

Brown Brothers' sprayer.—W. N. Scarff, New Carlisle, Ohio.

Gould's, old types.—Smith Brothers, Concord, Ga.

Deming field sprayer.—Carl Sonderregger, Beatrice, Nebr.

Aspinwall sprayer for small stock.—L. R. Taylor & Sons, Topeka, Kansas.

Have used a Wallace machine, but do not like it.—Wedge Nursery, Albert Lea, Minn.

Gould sprayer.—Whiting Nursery Co., Yankton, S. D.

PROMISING NEW FRUITS

What new fruits of promise have appeared in your region recently?

None that we know of except the Abington strawberry.—Bay State Nurseries, N. Abington, Mass.

None except the "Success" pecan, which is a grand success.—Bechtel Pecan Nurseries, Ocean Springs, Miss.

None.—E. P. Bernardin, Parsons, Kansas.

Herbert raspberry.—Brown Brothers Co., Browns Nurseries, Ontario.

Ray peach, Slappy peach, but the standard varieties are at the front.—J. G. Harrison & Sons, Berlin, Md.

None.—Hoopes Bro. & Thomas Co., West Chester, Pa.

Onslow apple for Coast sections, Miller Pear, Lindley

Peach.—J. Van Lindley Nursery Co., Pomona, N. C.

FRUITS FOR THE SOUTHWEST

Apples: San Jacinto, Bledsoe, Doyle, Stayman Winesap, Rutledge, Texas Red. New Century cherry. Munson mulberry. America plum. Peaches: Yellow Swan, Early Wheeler, Dr. Burton, Mamie Ross, Carman, Gov. Hogg, Champion, Slappy, Belle of Georgia, Superb, Munson Cling, Tiebout, Gold Dust, Munson Free, Blanchard, Dulce, Barnes, Bell October, Bonanza, Success. Pecans: Red River, Texas Prolific, Halbert. Kawakami persimmon. Blackberries: Sorsby May, Robison. Grapes: Pearl of Csaba, Headlight, Manito, Lomanto, President, Captivator, Ladano, Delakins, Nitodal, Salamander, R. W. Munson, Hernito, Merieadel, Krause, Extra, Latania, Blondin, Longfellow, Ronaldo, Ellen Scott, Armalaga, Edna, Cream, Hopkins, Last Rose, Grape of Eeol, Sanalba, Sanrubra, Labama, Sanmelaska, Dixie.—T. V. Munson & Son, Denison, Texas.

Yahnke apple, Mayflower peach, new everbearing strawberry from Germany, that makes no runners.—Carl Sonderregger, Beatrice, Nebr.

The Beta, an early grape that endures Minnesota winters without cover.—Wedge Nursery, Albert Lea, Minn.

NURSERY ACTIVITIES IN DIFFERENT PARTS OF THE COUNTRY

Remarks on nursery activities in your section.

Booming! We grow ornamental trees and shrubs, also herbaceous perennials, not much in fruits.—Bay State Nurseries, N. Abington, Mass.



Grafted Persimmons in the sub-tropical nurseries of Griffing Bros. at Macclenny, Florida. The Japanese persimmons are growing in popularity.



REED-BELL
GRAFT
WRAPPING
MACHINE.

Any ordinary
boy can wrap
from 15 to 20
grafts per
minute.
Experts have
wrapped 30
per minute.

Pat'd May 5, 1908

Activity in this section confines itself to pecan tree planting.—Bechtel Pecan Nurseries, Ocean Springs, Miss.

The nurseries in the southwest all seem to be growing more ornamentals, and all seem to be cutting down their apple plantings. Apple and peach trees never were in better demand than at this time, so far as this section is concerned.—E. P. Bernardin, Parsons, Kansas.

Most of the nurserymen through this part of the State have finished their deliveries, and are now stocking up their cellars with trees for next spring's shipment. We have had remarkably fine weather for work this fall, and almost every nurseryman who is wide awake has his stock in the cellar, his scions cut, and is ready for winter work such as grading, grafting, etc.—Des Moines Nursery Co., Des Moines, Iowa.

Conditions favorable. Good varieties and good trees are selling every day at good prices. Poor trees and poor varieties are a back number. The brush pile will get thousands. Our business has more than doubled the past year. Good clean apple are selling, good clean peach are selling, Kieffer pear are going, strawberry plant season not on, ornamentals are being asked for, privet is being planted, people are completing their outside surroundings.—J. G. Harrison & Sons, Berlin, Md.

Business good, a fine growing season, and a bright outlook for spring.—Hoopes Bro. & Thomas Co., West Chester, Pa.

Good.—J. Van Lindley Nursery Co., Pomona, N. C.

The outlook for this section of the country is unusually good.—F. W. Meneray, Council Bluffs, Iowa.

The constant attempts to engage in independent nursery business, by novices, who know only how to bud and graft, throwing blocks of peach and apple (mostly) on to the market at ruinous prices; and the silly, very bothersome and practically ineffectual inspection laws, fill the nurseryman's life with thorns, with little or no benefit to the planter.—T. V. Munson & Son, Denison, Texas.

We find many of the smaller nurseries going out of business, while the larger ones are inclined to increase their planting. So, as a whole, perhaps the acreage is about the same as it has been in the last few years.—W. N. Scarff, New Carlisle, Ohio.

Had a good growing season and a good selling season. Nothing to complain of.—Smith Brothers, Concord, Ga.

Trade with us has been good this fall.—Carl Sonderregger, Beatrice, Nebr.

There are no particular changes in the nursery field at this point. On the whole, we think there are considerably less fruit trees grown here than in former years, with some slight increase at least in growing of small fruits, ornamentals, etc.—L. R. Taylor & Sons, Topeka, Kansas.

Great enlargement of the business in the section north and west of Iowa.—Wedge Nursery, Albert Lea, Minn.

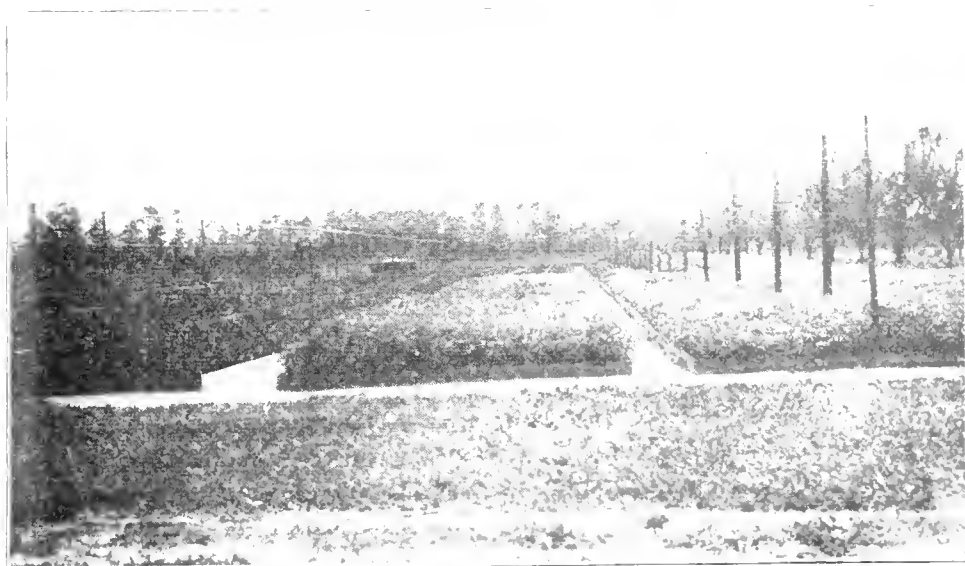
There is a heavy demand for nearly all lines of nursery stock, and the supply is quite limited. This is especially true of apple trees and forest seed and seedlings. Outlook good for heavy sales the coming spring. Very excellent weather here this fall and stock has ripened up well for winter. The ground is rather dry here now, and no snow at all as yet.—Whiting Nursery Co., Yankton, S. D.

HALE'S NEW DEPARTURE

THE NATIONAL NURSERYMAN notes with great interest a new departure made by J. H. Hale, the eminently successful apple and peach grower of Connecticut and Georgia, in connection with his fruit industries. As a result of the great tax upon his time made by those desiring expert advice in regard to the founding of orchard enterprises, Mr. Hale has established a Department of Council and Advice as a part of his immense orchard business, covering nearly 3,000 acres of land, substituting this for his nursery work at South Glastonbury, Connecticut. If there are prospective orchardists who do not know of Mr. Hale's great enterprises, suffice it to say that his paying orchards in two states now comprise 200,000 trees, or one thousand times the number with which he began in 1869, and that in the fall of 1910, his entire crop of apples was selling for nearly twice the sum quoted on other apples in the Northeast. For reasonable fees, Mr. Hale will furnish advice not merely on the development of new orchards, but on the making over of old orchards which have been considered of little value into productive properties.

PLANT FORMATIONS ON SOUR SOIL

On a soil that contains abundance of free humus acids, and is more or less peat-like, there occurs a group of more or less closely related formations. Sour soil is intimately associated with a moist, cold, or temperate climate. Many species of heather plants can grow both on extremely dry, warm soil, and on extremely cold, wet soil; such is the case with *Calluna*, *Empetrum*, several species of *Pinus*, *Juniperus communis*, *Betula nana*, *Saxifraga Hirculus*, *Ledum palustre*, and *Vaccinium Myrtillus* in Europe; *Pinus Teda* in the Dismal Swamps of the United States; and *Phormium tenax* in New Zealand. Many Arctic moors and swamps often become completely dried up. In low-moor (sedge-moor, lowland moor), the following are represented: *Cyperaceae*, *Equisetaceae*, *Epipactis palustris*, *Eriophorum*, *Juncaceae*, *Geum rivale*, *Epilobium palustre*, *Caltha*, *Trollius*, *Ranunculaceae*, *Menyanthes*, *Parnassia palustris*, also *Salix*, *Alnus*, *Rhamnus*, and *Ericaceae*. Moss-bogs preponderate in Arctic and Antarctic countries.—*Journal of Horticulture*.



Extensive seedling beds of Griffing Bros. Macclenny, Fla. Sub-tropical plants grown in large numbers.

THE GREAT FLOODS IN THE VALLEYS OF THE LOIRE AND RHONE, FRANCE

The Famous French Nursery Sections Inundated

We are indebted to the Louis LeRoy's Nurseries Company and their agent, Mr. H. Frank Darrow, for clippings from French papers, depicting the great disasters in the way of floods which have overtaken the famous nursery regions of France along the borders of the Loire and Rhone Rivers.

A despatch from Angers under date of November 30 says, that the aspect of the city of Angers is most deplorable. The great floods of 1856 and January, 1910, have been much surpassed. At the time of this writing water covered the entire shipping section, and encompassed the leading parts of the city. Electric light plant was put out of commission, and all public service transportation companies abandoned their plants. More than five thousand people were immured in their dwellings. This condition in the city was intensified, if possible, in the country regions, and the great plain of the Rhone River was transformed into an immense stream with a rapidly rushing current.

The amount of injury to nursery stock in this district is difficult to estimate.

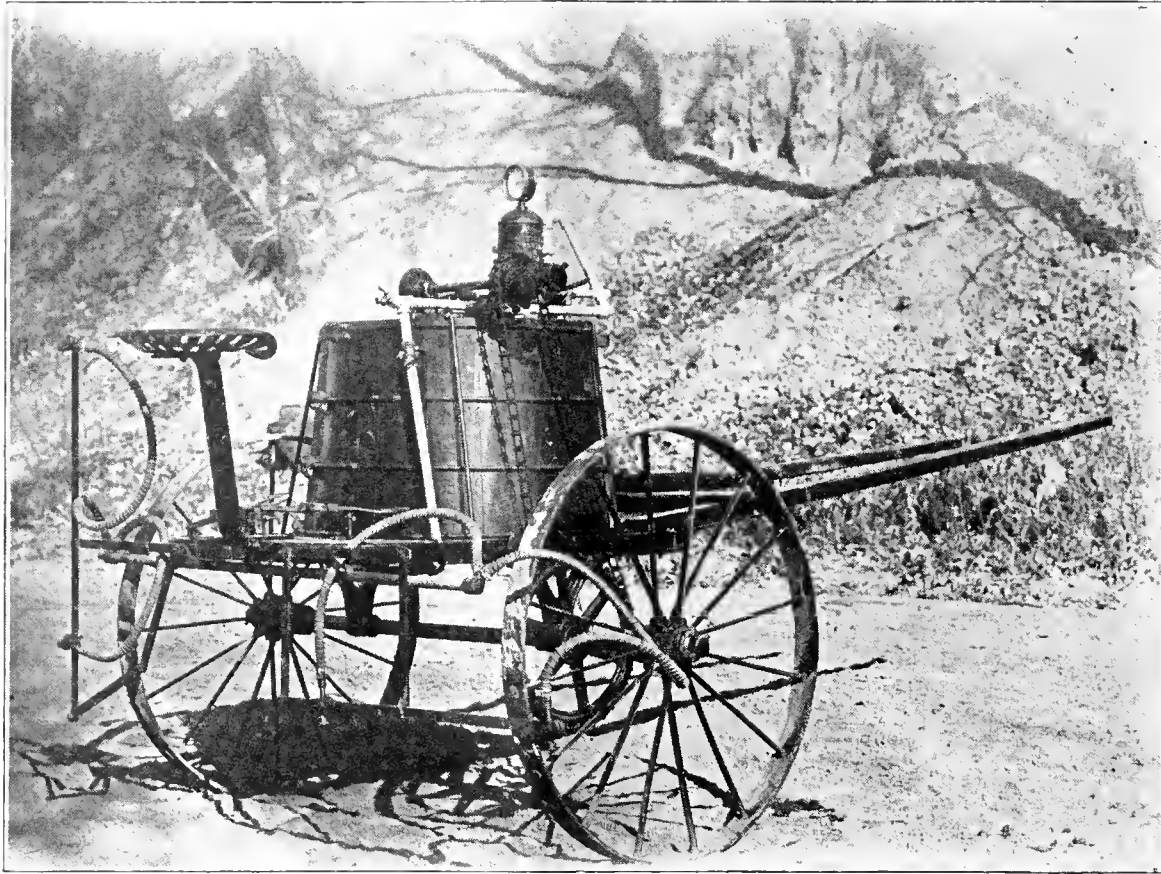
A note from Anjou depicts conditions somewhat as follows:

The usually lazy rivers, the Maine and the Loire, are in turn swollen by the enlargement of the many streams which flow into them, so that in places all traffic has been interrupted for a week. The sowing of the land will be much retarded, owing to the excessive dampness of the ground following this flood, so that there will be a correspondingly small harvest. The nurseries, which form one of the great sources of wealth in this part of France, are in some cases totally submerged, or even destroyed; and the vines, after their long submersion, will be found especially susceptible to cryptogamic diseases. These conditions naturally interfered with nursery operations to a serious extent and will undoubtedly have their effect upon next year's output.

MASSACHUSETTS NURSERYMEN'S ASSOCIATION

The first annual meeting of the Massachusetts Nurserymen's Association was held at Horticultural Hall, Boston,

Wednesday, December 7th. The craft was well represented, in numbers, nearly all the prominent nurserymen of the state being present. Aside from the excellent address by Dr. H. T. Fernald of Amherst College, the whole day was spent in the discussion of practical topics. Dr. Fernald spoke on the "Problem and Progress of Nursery Inspection in Massachusetts." He gave a history of nursery inspection in the Commonwealth during the past ten years, showing the development, not only of the inspector's work, but the large increase of the nursery business within the state during that period. His estimates show something over two millions of dollars now invested in the nursery business in the state.



The Hurst Traction Sprayer No. 8—with sixty gallon tank. Winner of the Silver Medal in Class B Traction Sprayer. Council Bluffs competition.

The report of the Secretary-Treasurer shows the association to be in good condition.

It was unanimously voted to extend an invitation to the American Association of Nurserymen to hold its annual convention in Boston in June, 1912. Mr. J. Woodward Manning of Reading, Mr. Adams of Springfield and Mr. Wyman of North Abington were made committee of invitation.

The following resolutions were adopted on the death of Mr.

Wm. B. Whittier, late proprietor of the Framingham Nurseries.

WHEREAS: In the course of human events, Mr. W. B. Whittier, proprietor of the Framingham Nurseries, South Framingham, Massachusetts was removed from earthly toil on the twenty-seventh of August last, in the midst of his years; therefore:

BE IT RESOLVED: That we members of the Massachusetts Nurserymen's Association in annual meeting assembled, offer the following resolutions:

FIRST: That we do hereby record the great sorrow and loss which the society has sustained in the sudden demise of so valuable a member, to whom many were personally attached.

SECOND: We also bear testimony to his ability in his profession; a man of strict integrity and reliability, whose word was as good as his bond, and a congenial fellow craftsman; possessing qualities which all his acquaintances admired.

THIRD: That we express to his bereaved family our sincere sympathy in the great loss which they have sustained.

(Continued on page 29)

WESTERN ASSOCIATION OF NURSERYMEN

Excellent Meeting. Geo. A. Marshall, Arlington, Neb., Elected President

Report by Secretary E. J. Holman.

The Twenty-First Annual Meeting of the Western Association of Nurserymen commenced Wednesday, December 14, 1910, 10:30 A. M., at the Coates House, Kansas City, Mo., President J. H. Skinner in the chair. The following

Messrs. Brown, Welch and Schuette were appointed a committee on nominations, on audit, Messrs. Merkel, Lopeman and Fields, on Missouri Inspection Law, Messrs. Bagby, Weber and Ferguson. Luncheon was called at 1 P. M., when



The Udell device for reaching the tops of tall trees with the spray mixture. A demonstration.

members were present: E. P. Bernardin, C. W. Carman, Des Moines Nur. Co., The Elmhurst Nurseries, B. E. Fields & Son, T. E. Griesa, Harrison Nursery Co., Holman Bros., Holsinger Bros., Kansas City Nurseries, Kelsey Nurseries, D. S. Lake, J. A. Lopeman, Marshall Bros., Montana Nur. Co., Mt. Hope Nurseries, C. W. Murphy, The National Nurseries, New Haven Nurseries, W. C. Reed, J. W. Schuette & Co., The Sedgwick Nurseries, J. H. Skinner & Co., F. H. Stannard & Co., Stark Bros., N. & O. Co., L. R. Taylor & Sons, H. J. Weber & Sons Nur. Co., E. S. Welch, Geo. H. Whiting Nur. Co., The Winfield Nur. Co., A. Willis and Youngers & Co., and the newly admitted members to wit: The Southwestern Nur. Co., The Frazer Nur. Co. and C. C. Elwell. The secretary's report was read and approved.

Letters were read from the cities of St. Louis, Omaha, and Portland inviting the association to their respective cities. Resolutions favoring New Orleans as the location for the 1915 Panama Exposition were read and endorsed.

the association repaired to the banquet hall seating themselves at one long table which had for its center display the Loving Cup, the gift of the Eastern Brothers of the American Association, containing an immense bouquet of carnations, while the sides were flanked with grand specimens of the Stark Delicious Apple. We ate in the garden though no Eve was present. A happy event concluded the feast when Mr. C. G. Ferguson arose and feelingly spoke of Mr. W. P. Stark's annual Delicious treat and moved the association to a standing vote of its appreciation. Mr. Stark responded felicitously. At 2:15 P. M., President Skinner called the meeting to order and read his address which was very favorably received and secretary instructed to send copies to the trades journals. The treasurer's report showed receipts \$461.45, expenses, \$122.72, balance in treasury \$338.73. Audited and approved.

Committee on nominations reported the following names for officers of the Association for the ensuing year: Presi-

dent, George A. Marshall, Arlington, Neb.; vice-president J. A. Lopeman, Enid, Ok.; secretary and treasurer, E. J. Holman, Leavenworth, Kans.; executive committee, F. H. Stannard, Ottawa, Kans., W. P. Stark, Louisiana, Mo., W. C. Reed, Vincennes, Ind., J. W. Hill, Des Moines, Ia., H. Chase, Huntsville, Ala. Report received and ballot of the Association cast for the same.

A new by-law by E. P. Bernardin relative to reporting members was adopted.

COMMITTEE REPORTS.

The committee on root-knot, Messrs. Youngers, Harrison and Marshall spoke of their work and report to the American Association meeting at Denver. They were voted a resolution of thanks and the expense bills ordered paid.

The committee on legislation, Messrs. Stark, Brown and Fields reported concerning their work and urged a continuous prosecution of unreasonable state laws. Their expense bills were ordered paid.

Mr. Youngers, representing the American Association in legislation for the West was strongly requested to give this matter his attention with the assurance of the support of the Western Association.

Prof. S. J. Hunter of Kansas University and of the State Entomological Commission was present and gave valuable information resulting from the prosecution of his work. The association established a precedent in suspending the rules and electing Prof. Hunter to honorary membership.

The secretary was instructed to write to the inspectors of the various states and invite their presence and aid at future meetings.

A. J. Brown, defined and the Association approved, that a bonafide nurseryman was one who propagates and grows trees, plants and shrubs from seeds and cuttings, or by budding or grafting, or by transplanting small stock for growing into large and more valuable trees, plants or shrubs, regardless of the number of acres so grown.

Mr. Willis' address on the propagation of the apple and its culture provoked much interest. Mr. Willis said he felt there were lessons unlearned though it seemed so simple when he first started out to be a nurseryman many years ago.

The retail end of the nursery business by Mr. Balco was keenly debated. The Woolly Aphis question by Mr. Murphy was satisfactorily discussed and the new light in way of control given by Prof. Hunter very encouraging.

THE ST. LOUIS MEETING.

Messrs. Stark, Hill, Schuette, Weber and Youngers were full of the St. Louis spirit, which it is hoped will possess ever nurseryman and make the next meeting of the American Association a record breaker in attendance, pleasure and mutual profit.

The gentlemen who labored so successfully in the Denver entertainment were much appreciated and profusely thanked.

The last of four sessions was concluded at 4 P. M., on the 15th. It was indeed a conference of practical men who industriously spent the time in making the meeting one of the greatest mutual profit. Much of interest in the discussions is necessarily omitted. Valuable papers read before the meeting will appear separately and in the columns of the trade journals.

A FLORIST NOT A MERCHANT

"According to the Delaware, O. *Gazette*, Attorney-General Denman has decided, for the benefit of the new State tax commission, that a florist is not a merchant, but rather is in a class with manufacturers or other producers. The taxing authorities at Washington C. H. had Mrs. L. Buck, who runs a greenhouse, down on the tax duplicate as a merchant and her flowers and plants as merchandise. She is not a merchant because she does not buy anything; everything she had she had produced, says the opinion."—*Florists' Exchange*.

NOTED CROWN-GALL CASE SETTLED

D. Roy Smith vs. New England Nurseries

This case, in which the plaintiff endeavored to recover damages to the amount of \$6,000 from the New England Nurseries to cover supposed losses due to planting trees infested with crown-gall, was settled by a board of arbitrators a few days ago. The decision resulted in a verdict for the defendants, the arbitrators finding that the plaintiff suffered no appreciable damage from the nursery stock in question being

affected with crown or root-gall. They also find such wide divergence of opinion as to the harmfulness of these diseases as to render it an open question just what the effect of their presence is on nursery stock. The report will appear in full in our next issue.



G. A. Marshall, of Marshall Bros. Company Arlington, Nebr., President Western Association of Nurserymen.

The Florists' and Nurserymen's Association of Montana continues to make steady progress, and the very latest additions to its membership are Mr. James King (Butte Floral Co.), Mr. Victor Larson (care of State Nursery Co.), and Messrs. M. L. Tippen and E. W. Horton (care of Montana Nursery Co.)

The Western Nursery Company of Logan has filed articles of incorporation with the Secretary of State. The company has a capital stock of \$10,000, with shares at the par value of \$1 each. The officers are: F. E. Clark, president; H. C. Clark, vice-president; G. D. Cardon, secretary; Katherine S. Clark, treasurer.

John T. Withers, Jersey City, N. J., has returned from his trip around the world.

The Southwestern Nursery Co., of Troy, O., has increased its capital stock from \$10,000 to \$25,000.

Mr. E. I. Martin, proprietor of the Redlands Nurseries of Redlands, California, has retired from the nursery business.

QUIZ COLUMN

A BATCH OF BOOK INQUIRIES

I have purchased and read with a great deal of pleasure a number of Bailey's books on agricultural subjects. I am about to start an orchard, including small fruits and grapes, and am contemplating purchasing what I need from ——. I know nothing of these gentlemen, and thinking that perhaps you had a wide acquaintance with nurserymen, you might be able to answer the question, with a single word, as to whether they are reliable or not. I know them to be financially responsible, but what I mean is this: Can I trust them to send me reliable plants, trees, etc., true to what they represent them to be?

Your answer would be much appreciated.

Louisville, Ky.

A. Z.

ANSWER

This is not an unusual type of inquiry. It is most agreeable to answer it as follows:

It affords us much pleasure to reply to your letter of recent date. The nursery firm you inquire about is one of the largest, and most progressive in the country. We have had the pleasure of knowing these gentlemen for a number of years, and regard them personally very highly. Junior members of this now noted house of nurserymen have been students in the best colleges of agriculture of the country. They are studying the business of tree growing and the scientific aspects of plant culture with a view of carrying on their business to the largest advantage to themselves and their patrons.

All nurserymen are human and as such, liable to err. The nursery business is one of the most exacting in the whole range of occupations, and it is exceedingly difficult to maintain varieties grown in great numbers and in large quantities absolutely without mistake as to trueness to name. We feel sure that you can trust these men to conscientiously sell you given varieties to the best of their ability.—EDITOR.

BOOKS FOR PLANT GROWERS

EDITOR NATIONAL NURSERYMAN:

1. Sir:—Will you kindly give us a list of the best books on nursery stock culture?

Purcellville, Va.

VIRGINIA NURSERY CO.

ANSWER

We are glad to reply to your question asking for a list of the best books on nursery management. As a matter of fact, however, there is no one book which covers in sufficient detail the operations of the nurseryman to be regarded as a handbook or manual. A number of publications cover this field in part, or superficially, but at the present time, if a person desires complete directions or supposedly complete references on the whole subject, it will be necessary to buy more than one book.

For general reference on the whole field of horticulture, there is nothing better than the "Cyclopedia of American

Horticulture." This is published in four volumes by the Macmillan Company of New York, edited by L. H. Bailey, price \$20.00. See advertisement in the NATIONAL NURSERYMAN.

For the use of specialists and designed for nurserymen's use, the following three books are useful.

1. "The Nursery Book," author Bailey, published by the Macmillan Company, price \$1.25.

2. "Propagation of Plants," Fuller, Orange Judd Co., price \$1.00 or \$1.25.

3. "The Rule Book," Bailey, Macmillan Company, price \$.75.

If the nurseryman is interested in forestry and floriculture, we would advise him to secure a book entitled "Forestry," Gifford; Appleton & Co., and if interested in floriculture, "Greenhouse Management," by Taft, Orange Judd Co., will be found instructive and valuable. The latter two works cost about \$1.25. All of these works may be obtained through this office at the usual retail rate.—EDITOR.

GREENHOUSE CONSTRUCTION

2. I write to you to see if you would put me on the right track to learn something about greenhouse work. I am interested in raising tomatoes under glass. I would be glad to know if there are any books for sale on the subject.

NEW JERSEY.

ANSWER

The number of books on greenhouse work is not very large, although one can usually find special references bearing upon the management of particular crops. Probably the best general work of reference is "Greenhouse Management," by Taft. This is published by the Orange Judd Co., of New York, and can be obtained through them or any local book dealer, or this office. Another book which covers the subject of forcing vegetables more especially is "The Forcing Book," by Bailey and published by the Macmillan Co. These works cost from seventy-five cents to one dollar, and are very useful indeed for the man who expects to engage in greenhouse work, either in the forcing of flowers or vegetables. EDITOR.

BOOKS ON FRUIT GROWING

3. Will you please send me a list of books and prices of same on Fruit Growing and what kinds would you advise for eastern Washington in the Rocky Mountains?

WASHINGTON.

ANSWER

We would recommend the following books as being specially valuable for the fruit grower on the North Pacific Coast, especially in regions where irrigation is desirable or necessary:

"Fruit Growing in Arid Regions," Paddock, \$2.00; "Nursery Book," Bailey, \$1.25; "The Soil," either King or Hilgard, \$1.00 and \$2.50, respectively.

[Continued on p. 21]

AMERICAN POMOLOGICAL SOCIETY

Program of Thirty-Second Biennial Session to be held in Tampa, Florida, February 9, 10 and 11, 1911

OUR HOSTS—The American Pomological Society has accepted the invitation of the Florida State Horticultural Society and the Tampa Board of Trade to meet in Florida and in the city of Tampa for its thirty-second biennial session. The date fixed has been mainly the choice of our hosts, in conjunction with the most favorable transportation rates available.

PROGRAM—This has been arranged to furnish as far as possible topics of interest for the fruit growers of the North, East, South, and West. Naturally we have emphasized problems relating to the South, for our largest attendance is expected from that quarter. The subjects which follow are grouped according to relationship. The order is purely arbitrary in the following pages and may be changed in accordance with the judgment of the committee on order of program. It is highly desirable that the report of the American Pomological Society should contain information regarding the status and progress of fruit culture in different parts of the country, for no other organization or institution covers this particular field. There is at the present time a keen demand for authoritative information upon the resources and opportunities for orcharding in all sections where commercial culture is possible. To this end, the program of the present session and sessions of this society generally deals in a larger way with pomological topics than is usual at the conventions of state or district organizations.

MEETING OF SOCIETY FOR HORTICULTURAL SCIENCE—This, the official society of the horticulturists of the colleges of agriculture and experiment stations of the United States and Canada, will meet on February 9, in Tampa, and hold two sessions immediately preceding the sessions of the American Pomological Society. The presence of these technical workers in the field of horticulture will add greatly to the interest and value of the meeting.

RAILWAY RATES—All transportation lines reaching the South offer reduced winter tourist rates. In addition to these, the lines west and north of the Ohio and Mississippi River gateways are offering special homeseeker rates on the first and third Tuesdays of each month. These tickets are good for twelve days and are sold at a very low rate.

HOTELS—Tampa Bay: Rates \$4 and up. American plan. De Soto Hotel, \$2.50 and up. American plan. Among other city hostleries are the Arno, the Almeria, and Hillsboro, \$2.50 to \$3.50 per day.

CONVENTION HALL—The regular sessions will be held in the Tampa Bay Casino; committee meetings will be held in the Music room of the Tampa Bay Hotel.

EXHIBITION HALL—Exhibits will be displayed in Horticultural Hall in the attractive City Park.

Detailed information regarding accommodations may be obtained by writing Mr. W. B. Powell, Secretary Board of Trade, Tampa.

PROGRAM

The following program will be carried out as completely as possible, but the order may be changed by the committee in charge of "order of program," appointed at the opening session.

THURSDAY, FEBRUARY 9

Opening Session, Tampa Bay Casino, 8 P. M.

Call to Order, - - - - - President L. A. GOODMAN
Invocation, - - - - -
Welcome to Tampa, - - - - - Mayor D. B. MCKAY
Welcome on Behalf Florida State Horticultural Society,
President G. L. TABER
Response, - Col. G. B. BRACKETT, United States Pomologist
Appointment of Committees, - R. B. WHYTE, Ottawa, Can.

CONTROL OF ORCHARD ENEMIES

Control of Orchard Enemies by Natural Parasites,
Doctor L. O. HOWARD, Chief Bureau of Entomology, Wash., D.C.
Experiences in Spraying, 1910, Hon. H. M. DUNLAP, Savoy, Ill.
Diseases of Nut Trees, Mr. M. B. WAITE, Bureau of Plant Industry
Florida Experiences in Controlling Insects by Natural Enemies,
Prof. P. H. ROLFS, or Representative of Florida Exper. Station
The Sulphur vs. The Copper Fungicides,
W. M. SCOTT, Bureau of Plant Industry, Washington, D. C.
Some Fungus Enemies of Southern Orchards,
Prof. H. S. FAWCETT, Gainesville, Florida

TROPICAL AND SUBTROPICAL QUESTIONS

Persimmons, Japanese and American, H. HAROLD HUME, Florida
Rotundifolia Grapes, Prof. R. C. REIMER, Raleigh, N. C.
Mango Culture in Florida, JOHN B. BEACH, West Palm Beach, Fla.
Some Little Known Tropical Fruits Which May be Grown in
South Florida, Dr. JOHN GIFFORD, Miami, Florida
Phases of Cuban Fruit Culture,
H. C. HENRICKSEN, Sec. Cuban National Horticultural Society
Pineapple Culture, - BRYAN MCCARTY, Eldred, Florida
Fig Culture in Texas, - Hon. SAM H. DIXON, Houston
Fertilizers for Oranges, - E. O. PAINTER, Jacksonville
The Outlook for Orange Culture in Florida,
L. B. SKINNER, Dunedin, M. E. LITTLE, Tampa

FRUIT TRANSPORTATION AND STORAGE PROBLEMS

Transportation of Citrus Fruits, A. V. STUBENRAUCH,
Expert in Charge of Fruit Transportation, Division of Pomology,
United States Department of Agriculture, and H. J. RAMSEY,
United States Department of Agriculture
Standard Packages, - E. S. STOCKWELL, Alvin, Texas
Keeping Quality of Apples, Prof. W. R. LAZENBY, Columbus, O.
Co-operation in the Marketing of Fruits, W. H. BUNTING,
Pres. Ontario Fruit Growers' Association, St. Catharines, Ontario
Distribution and Marketing of Fruits, R. P. BURTON, Tampa, Fla.
Freight representatives of all the railways leading into the
South have been invited to attend this session and take part in the
discussion.

PROGRESS IN FRUIT GROWING

A. Deciduous Fruits:
Fruit Growing in Virginia, Dr. S. W. FLETCHER, Blacksburg
Peach Growing in Georgia, - L. A. BERCKMANS, Augusta
Apple Culture in Tennessee, J. F. ELLIS, Dayton, Tennessee
Apple Growing in North Carolina,
Prof. W. N. HUTT, State Horticulturist, Raleigh
Commercial Peach Growing in North Carolina,
J. VAN LINDLEY, Pomona
Strawberry Culture in Kansas, F. W. DIXON, Holton
Commercial Strawberry Culture in North Carolina,
J. A. BROWN, Chapburn
Apple Culture in Arkansas, Hon. JOHN P. LOGAN, Grannia
Conditions and Opportunities for Apple Growing in Arkansas,
Prof. ERNEST WALKER, Fayetteville

The Adaptation of the Pear to the Upper Mississippi Valley Region
CHARLES G. PATTEN, Charles City, Iowa
B. Citrus Fruits:

The Present Status of the Citrus Industry in California,
Director E. J. WICKSON, Berkeley
Progress of Citrus Culture in California, GEO. C. ROEDING, Fresno
Citrus Culture in Texas, R. H. BUSHWAY, Algo
Citrus Trifoliata in Relation to Citrus Culture, W. T. SWINGLE,
Bureau of Plant Industry, Department of Agri., Washington, D.C.
Progress of Citrus Culture in Louisiana, R. S. MOORE, Naomic

ORCHARD MANAGEMENT

Orchard Heating in the Middle West,
Prof. WENDELL PADDOCK, Columbus, O.
Orehard Heating in Missouri, Prof. W. L. HOWARD, Columbia
Protecting Fruits from Low Temperatures,
J. A. CROSLY, San Mateo, Florida
Introducing Pollenizers by Topworking, R. A. SIMPSON, Flora, Ill.
Soil Treatment and Management for Apple Production in Illinois,
W. S. PERRINE, Centralia
The Relations of the Soil to Plant Life, GEO. T. POWELL, Ghent, N.Y.
Pear Growing in New Jersey, JOHN S. COLLINS, Moorestown
Adaptation of Orchard Planting Plans for Special Conditions,
Prof. H. L. PRICE, Blacksburg, Virginia
Secondary Crops in the Orchard,
HORACE ROBERTS, Moorestown, N. J.

SYSTEMATIC POMOLOGY

The Importance of a Definite System of Nomenclature,
Prof. E. R. LAKE, Division of Pomology, Department of Agriculture, Washington, D. C.
Judging Fruits by the Score Card Method,
Prof. H. E. VAN DEMAN, Washington, D. C.

A discussion on the desirability of arranging district or sectional score cards to meet the needs of some of the newer fruit sections will take place during this session. This is an exceedingly important matter.

BREEDING QUESTIONS

Breeding Improved Varieties of Fruits and Nuts,
E. W. KIRKPATRICK, McKinney, Texas
Some Results in Improving Native New Fruits,
Prof. N. E. HANSEN, Brookings, S. D.
The Adaptation of the Pear to the Mississippi Valley States,
CHAS. G. PATTEN, Charles City, Iowa

NUT CULTURE

Pecan Growing in Georgia: Its Present Condition and Future
Outlook, J. B. WIGHT, Cairo, Georgia
Stocks for Pecans with Remarks on Propagation,
J. F. JONES, Jeanerette, Louisiana
Pecan Culture in Florida, H. K. MILLER, Monticello

EXCURSIONS

The following attractive and instructive excursions have been arranged by the Tampa Board of Trade:

1. By Rail to Florence Villa.
2. By steamer to the Manatee River, orange and grape fruit districts.
3. By automobile to the west coast. These are all important citrus and tropical fruit districts.

FRUITS FOR EXHIBITION

The Society cordially invites exhibits of commercial and educational value. These exhibits may take the form of collections of fruits, or authenticated records of orchard management, of yields and returns, made by individuals, societies, or districts. These exhibits should be forwarded to the Secretary of the American Pomological Society, Tampa, Florida, by express prepaid. They will be staged by a committee of the Society if the owner is unable to be present and placed on the exhibition tables.

WILDER MEDAL AWARDS

The Society possesses a fund donated by its first president, Marshall P. Wilder, the income of which is used for the making of medals in silver and bronze to be given to worthy exhibits. These exhibits are not in competition, but stand on their individual merits. A competent committee will pass upon these, and such as are deemed worthy of award will be recognized by silver or bronze medals, or honorable mention. Originators or introducers of new fruits should take this means of bringing them to the attention of the pomological world. Blanks will be provided by the Secretary to all those who signify their intention of making an exhibit.

L. A. GOODMAN, *President*,
Kansas City, Mo.
JOHN CRAIG, *Secretary*,
Ithaca, N. Y.

Our Book Table

WHO'S WHO AMONG THE WILD FLOWERS, by W. I. Beecroft.
Published by Moffat, Yard & Company, New York, 1910. 4 1/2 x 7, 361 pages. Illustrated. Price, \$1.20.

Unlike the great majority of books on this interesting subject, intended to guide the unbotanical individual in the identification of our wild flowers, as well as to aid the scientific student in a careful examination of the less common varieties, this little volume leaves it to the reader himself to record any ideas suggested by the appearance of the flowers. The author believes, and many amateurs in this direction who have tried to study out a new flower, will agree with him, that an accurate portrait of any flower will be of infinitely more value than any number of paragraphs of descriptive matter. Thus, we find an illustration for nearly every one of the two hundred or more varieties discussed in the book, with the exception of a few instances where two plants resemble each other closely. On the page preceding the illustration are found the briefest possible notes on appearance and locality, followed by a blank space for the reader's personal appreciation of the flower. Perhaps it may not be amiss here to give an example taken from this volume:

COMMON VIOLET: Purple, Meadow or Hooded Blue Violet.
Viola Papilionacea.

Violet Family. Apr.-June.

Plant 3-7 inches high, found in low ground. Massachusetts to Minnesota and southward.

Flowers—Light purple, variable, divisions yellowish or white at the base.

Leaves—Heart-shaped, scallop-toothed.

The book is divided into the following sections: White and Greenish; Yellow and Orange; Red, Pink, Crimson and Magenta; Blue and Purple; Miscellaneous; and in each division, the flowers are arranged according to their time of appearance. The nomenclature agrees with that in the latest edition of Gray's "Manual." The best known and most used of the common names are given in large type, followed by less frequent designations in smaller type. As to the illustrations, all who are familiar with the little dwellers of the woods and fields will agree that they are here represented with faithful accuracy.

The Youth's Companion Calendar for 1911. The publishers of The Youth's Companion will, as always as this season, present to every subscriber whose subscription (\$1.75) is paid for 1911 a beautiful Calendar for the new year. The picture panel reproduces a water-color painting of an old-time garden in a flood of summer sunshine, with a background of Lombardy poplars through which one catches a glimpse of distant hills. The picture being in 12 colors, the tones of the original are faithfully reproduced.

GOOD PHILOSOPHY

Should a Young Man Choose the Nursery Business for a Vocation?

A. WILLIS, Ottawa, Kansas

The choice of a vocation is one of the most serious things that comes to a young man. To many young men it means the directing of his whole life in some direction; to others it means a start to be abandoned for something else the first time some glittering gewgaw is presented to attract attention. These are not now under consideration. Very many young men never choose a vocation. Their circumstances are such that they naturally drift into this business or that, and when once started no particular time comes when any inducement to change is seen; and so it is settled with no particular choice on the part of the young man as to what he shall do for his vocation.

It is said in China a son must follow the vocation of his father. In many cases in this country he is in this or that just because he is. But the young man we have in mind is one of your intelligent, purposeful men, who has somewhat of education, good habits, and a purpose in life to make his life count something of usefulness to his fellowmen and to himself. He is one of the kind who, when he puts his hand to the plow goes forward and says, "My choice is made, and now the question is, how to make the best of it." He has learned something of the losses and risks and uncertainties incident to this business. He has also learned something of the value of this calling to the farm and village and to the country at large. He also knows something of the inducements offered by other lines of business. He is at an age when, if he ever chooses, he must choose. You have a friendly interest in this young man; you would advise him if you could. You have knowledge of the business, its history, its opportunities, its usefulness, its influence on young men and on the community in which the business is conducted and on the country at large. You know something of the young man, his abilities and capabilities, and his adaptability to this work. You want him to succeed in getting the largest success for himself in all lines. You are anxious his business should be a help in the community where it is situated, and that it should contribute its share in beautifying and benefitting the country at large. With all this before him, shall he choose the nursery business for a vocation? Would you advise him to choose this business for his vocation?

Remember, that few nurserymen are rich. So far as is known to the writer, there is no nurseryman worth a million who has made his money in the nursery business in this country. There is, so far as known to the writer, no nursery firm who has ever handled a million dollars worth of nursery stock in any one year in the regular way of trade. There have been few great men among nurserymen and few ever held high official positions. This calling does not promise large success in a business or financial way, nor yet in official honors and preferments; but it does promise, if faithfully followed, a comfortable support and in some cases a degree of luxury for its members. It promises, if carefully

cultivated, good character, and in large degree the confidence and good will of those with whom you associate.

You will have the satisfaction of knowing that no one does more to adorn the landscape or make beautiful the home of the working man or the mansion of the rich, and no one has contributed more to promote the pleasure and good health of his fellowmen than the people who have supplied the planter and the orchardist and the landscape artist with the fruit and ornamental trees they have needed for their work.

LEST YOU FORGET

Before deciding how you would advise this young man, let me ask that you call to mind your own experiences as a nurseryman. Do not forget the drouth that cut short your crop nor the hail storm that destroyed it when it was partly grown. Do not forget the bogus dealer who bought a big bill of you and then paid nothing. Do not forget the man who came to you with fair promises and whom you trusted, and who when payday came laughed at you and did not even thank you. Do not forget the railroad company that delayed your trees en route so your plans for your packing were altogether disarranged, and when you shipped them out failed to get them to the place of delivery on time, and then refused to make good the loss their neglect had caused; for if you are a nurseryman you have suffered all these things and probably more. You have done your best work and seen it fail to bring the results you thought should have been realized.

While all these things are true and they brought loss and trouble, do not forget you also have had your measure of success. The bright sunshine and the gentle rain and the fertile acres and the efforts you have been able to put forth have brought you a measure of success that has given you much satisfaction. Life to you has been a battle and you have felt the joy of victory much more often than you have felt the sting of defeat, and the sum of your victories has been so much greater than the sum of your defeats that now you look over the past and say you have been the better and are today the stronger for the opposition you have met. It must be remembered that riches and official honors and the honors that many esteem so highly are not the greatest things in life. You feel stronger for the fight you have made, and your experience is worth much, so that from the present, as we look back, we say we have more to be thankful for than we have to complain of; and we should not hesitate to say, or in any way qualify the statement, we are glad we have given our life to the calling of the nurseryman, and we should advise, if the young man was a suitable man for such calling, that he go forward to his life work as a nurseryman with courage and hope and a purpose to succeed, believing that if he will he may succeed well. Then should a young man choose the nursery business for a vocation? Yes, if he desires to do so.

Doings of Societies

MICHIGAN STATE HORTICULTURAL SOCIETY

Twenty years from now the members of the Michigan State Horticultural Society may be listening to successful fruit growers whose interest in their State Society was aroused in their college days. If this happens it will be due to the excellent method which is being inaugurated by this Society to stimulate the enthusiasm of the coming horticulturists of the state. This is by conducting at their annual meetings competitive five-minute talks by Senior horticultural students of the Michigan Agricultural College, with prizes of \$15, \$10, and \$5.

According to the attractive program for the 1910 meeting, recently received at this office, there were eight candidates for first honors on this occasion. The annual meeting was held in Benton Harbor, Michigan, December 6, 7, and 8, the Berrien County Horticultural Society being host for the third time in seven years.

There were seven sessions, including the annual banquet at the Armory, with Hon. Chas. W. Garfield, as toastmaster. Among the speakers at most of the sessions was one of the staff of the Michigan Agricultural College, and Prof. M. B. Waite of the U. S. Department of Agriculture gave two addresses. Beside this, several of the fruit growers of the state gave accounts of their successes of the past year. The exhibits of fruit and flowers were not the least important feature of the convention, and awards included a B. G. Pratt scalecide cup, spraying apparatus from several manufacturing and chemical companies, nursery stock, and yearly subscriptions to some of the well known horticultural papers.

OREGON STATE HORTICULTURAL SOCIETY

The twenty-fifth annual meeting and quarter-centennial celebration of the Oregon State Horticultural Society took place, November 30, December 1 and 2, in Portland, Oregon. Two floors were used for the exhibits, and a separate one for the program. The feature of the convention was the anniversary session, held on the afternoon of the last day. The program for this session included a "Historical Sketch of the Society," by George H. Himes, of the Oregon Horticultural Society, Portland; an account of "Twenty-five Years of the Nursery Business in Oregon," by J. H. Settlemeier, Woodburn; and five minute talks by a score or so of the members of the Society.

MINNESOTA STATE HORTICULTURAL SOCIETY

This is one of the older state horticultural societies, having held its forty-fourth annual meeting on December 6, 7, 8, and 9, 1910. Several other societies having similar interests met with this Society, and took part on the program, the president of each society in turn being in the chair at some time during the various sessions. The papers in general were limited to ten minutes. In nearly every session a half-hour was devoted to questions and answers on topics arranged beforehand; and a number of lantern-slide

talks added interest to the meetings. Under the standing offer of this Society for seedling apples, a sum has been set aside providing \$100 annually for seven years beginning in 1912, for the best late winter seedling apple.

KANSAS STATE HORTICULTURAL SOCIETY

Like the Minnesota Horticultural Society, this association held its forty-fourth annual meeting during the closing days of the year 1910. The sessions occupied parts of three days, and were held in the State Capitol. The sessions during the day time were largely taken up with reports of officers and committees, allowing for only a small number of addresses; but for the evenings, programs of illustrated lectures had been prepared. Among the speakers were: J. M. Irvine, editor of the St. Joseph Fruit Grower, and H. P. Gould, pomologist of the U. S. Department of Agriculture. The exhibits of this society are not competitive, but every exhibit of merit receives an award.

APPLE CONGRESS MEETS AT DENVER

The First American Apple Congress, which met in Denver, December 15-17, took the place of the national apple show of the previous year. The purpose of the convention was to establish a permanent organization, such as the Spokane National Apple Show. Governor John F. Shafroth of Colorado, in his official call, gave a full explanation of the congress, noting the vast importance of the apple industry in many states of the Union, and the desirability of having uniform methods of dealing with the varied problems of constant recurrence in connection with this industry. Delegates were appointed from Colorado towns in proportion to their population, each fruit trade journal, fruit company, and fruit growers' association had delegates, and numerous others were designated by the Governor. The governors of other apple producing states were requested to have delegates appointed in a similar way. A temporary executive committee was authorized to make such arrangements as to assure the success of this first national apple congress. M. N. Batles, of Pueblo, was elected president of the Congress for the ensuing year.

VIRGINIA STATE HORTICULTURAL SOCIETY

This comparatively young society will hold its fifteenth annual meeting in southwestern Virginia, at Roanoke, January 11th to 13th, the last day being devoted to an excursion to Blacksburg, where the State Experiment Station is located. The program for the first two days is full of interesting subjects, and among the speakers are H. W. Collingwood, editor of *The Rural New Yorker*, and J. M. Irvine, editor of *The Fruit Grower*. Spraying matters will be presented by Dr. M. B. Waite and Prof. W. M. Scott, both of the Bureau of Plant Industry. Among the other speakers are Edward Van Alsteyne of Kinderhook, N. Y., on apple orchards, and Prof. G. W. Cavanaugh of Cornell University, on fertilizers. The competitive fruit exhibit includes several classes of apples, and one class each of vegetables, nuts, and other fruits. The judge of this exhibit is Prof. H. E. Van Deman.

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Correspondence from all points and articles of interest to nurserymen and horticulturists are cordially solicited.

Address, Editor, Ithaca, N. Y.

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ROCHESTER, N. Y., JANUARY, 1911.

AMERICAN ASSOCIATION OF NURSERYMEN.

President—W. P. Stark, Louisiana, Mo.; vice president, E. S. Welch, Shenandoah, Iowa; secretary, John Hall, Rochester, N. Y.; treasurer, C. L. Yates, Rochester, N. Y.

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LEGISLATION WEST OF MISSISSIPPI RIVER—Peter Youngers, Geneva, Nebr.

CO-OPERATION WITH ENTOMOLOGISTS—J. W. Hill, Des Moines, Ia.

PROGRAM—J. H. Dayton, Painesville, O.

PUBLICITY—Orlando Harrison, Berlin, Md.

EXHIBITS—J. W. Schuette, 5600 Gravois Ave., St. Louis, Mo.

ARRANGEMENTS—John Hall, Rochester, N. Y.; J. H. Dayton, Painesville, O., F. A. Weber, Nursery, Mo.

EDITING REPORT—John Hall, Rochester, N. Y.; Prof. John Craig, Ithaca, N. Y.

ENTERTAINMENT—F. A. Weber, Nursery, Mo.

FORESTRY—A. J. Brown, Geneva, Nebr.

CO-OPERATION WITH FRUIT GROWERS AND ASSOCIATIONS—J. M. Irvine, St. Joseph, Mo.

TRADE OPPORTUNITIES—Jefferson Thomas, Harrisburg, Pa.

NURSERYMEN'S SHARE IN CIVIC IMPROVEMENT—J. Horace McFarland, Harrisburg, Pa.

ROOT-KNOT—E. A. Smith, Lake City, Minn.

MEMBERSHIP—John Watson, Newark, N. Y.

STATE AND DISTRICT ASSOCIATIONS.

American Nurserymen's Protective Association—President, R. C. Berckman, Augusta, Ga.; secretary, Thomas B. Meehan, Dreshertown, Pa. Meets annually in June.

American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.

Association of Oklahoma Nurserymen—President, J. A. Lopeman, Enid, Okla. Terr.; secretary, C. E. Garee, Noble, Okla. Terr.

Canadian Association of Nurserymen—President—E. D. Smith, Winona; secretary, C. C. R. Morden, Niagara Falls, Ont.

Connecticut Nurserymen's Association—President, C. W. Atwater, Collinsville, Conn. Secretary, John S. Barnes, Yalesville, Conn.

Eastern Association of Nurserymen—President, Wm. Pitkin, Rochester, N. Y.; secretary-treasurer, William Pitkin, Rochester, N. Y. Meets annually in January.

National Association of Retail Nurserymen—President, Wm. Pitkin, Rochester, N. Y. secretary, F. E. Grover, Rochester, N. Y.

National Nurserymen's Association of Ohio—President, J. W. McNary, Dayton, O. secretary, W. B. Cole, Painesville, O.

Pacific Coast Association of Nurserymen—President, Geo. C. Roeding, Fresno, Cal.; secretary-treasurer, C. A. Tonneson, Tacoma, Wash. Meets annually in June.

Pennsylvania Nurserymen's Association—President, Samuel C. Moon, Pa., secretary, Earl Peters, Mt. Holy Springs, Pa.

Southern Nurserymen's Association—President, R. C. Berckmans, Augusta, Ga. secretary-treasurer, A. I. Smith, Knoxville, Tenn.

Tennessee Nurserymen's Association—President, A. I. Smith, Knoxville, Tenn.; secretary, G. M. Bentley, Knoxville, Tenn.

Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.

Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans. secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

ATTRACTIVE PROGRAMS

It is an exceedingly difficult thing at the present time to get out of the ordinary rut in the making of horticultural programs. The Secretary of the Indiana Horticultural Society, however, seems to have succeeded in this respect the present year. He has provided an exceedingly attractive little brochure of the semi-centennial meeting of the Indiana Horticultural Society, held at the State House, Indianapolis, December 7 and 8. This is artistic in make-up, very suggestive in matter, and is embellished with a sufficient amount of spicy material aside from the matter-of-fact program material as to render it a very readable document.

At this meeting, two charter members of the Society were present. These were Mr. Abraham Trueblood of Anderson, Indiana, and Mr. E. Y. Teas, the well known nurseryman of Centerville, Indiana. The program announces that these "alone are left of those who were present at the birth of our Society, who watched over our infancy and gave of their strength to our youth and by whose counsels we have profited through half a century of adversity and success."

WILLIAM PITKIN, STATE FAIR COMMISSIONER

This editorial is for the purpose of urging the re-appointment of William Pitkin as commissioner in charge of fruit, flowers, and farm produce at the New York State Fair. Mr. Pitkin has been in charge of this department for the last three years.

Under his direction the exhibits have increased in quantity, in quality, and notably in educational value. In 1907, there were 25 exhibitors; in 1910, there were 142 exhibitors, or an increase of over four hundred and fifty per cent. In 1907, only three county or grange exhibits were staged; in 1910, there were eight of these district exhibits. In 1907, there were only eight collections of fruit, while there were 44 in 1910. As an instance of the growth of the exhibits of worthy single varieties, it may be noted that there were only two plates of McIntosh apples exhibited in 1907, while there were 29 in 1910. This is the kind of educational work the fair is expected to promote.

Since Mr. Pitkin has taken charge of the department, these educational features have been constantly emphasized. The exhibits of the two state fruit growers' associations have increased in size as well as educational and commercial value.

The work of the department of fruit has been conducted on strictly business principles and as economically as possible. The fruit men of the state who are interested in having a strong, well equipped, nationally conducted department of fruit, flowers, and vegetables at the State Fair should use their influence in seeing that Mr. Pitkin is continued in office.

SELECTION VERSUS BREEDING

We have been much interested to note the growing interest of nurserymen in the matter of improving varieties by selecting favorable variations. An attractive pamphlet just received entitled "Progressive Horticulture," being the catalogue of the

Winfield Nursery Company, Winfield, Kansas, bears directly on this subject. The Y-S Nursery of Sunnyside, Washington, are establishing improvement work along the same line. This is all most commendable. There is, however, some confusion in the minds of growers over the use of the term "breeding," and the letter which follows is intended to present our position on this question. We do not wish in the smallest way possible to disparage the good work of our friends the nurserymen, but it is just as well at the outset to discriminate between what is true breeding and what is actual selection work.

When the nurseryman discovers an improved strain of Jonathan or Winesap, he perpetuates and multiplies it by grafting and budding. His work is selection plus multiplication. When the nurseryman applies the pollen of one variety of apple to the pistil of another, secures fruit, saves seed of this fruit, plants it, and from it secures an improved variety, he has bred this one, and his work is true plant breeding. In the first instance, he is selecting his variety, in the second, he is breeding it. Selection may come afterwards, but breeding is the prime requisite. Let us hope that this good work will go on, not only in the plots of the experiment station, but in the nurseries and orchards of the plant grower. Our correspondent, the Winfield Nursery, was written on this subject in the following strain:

"Your attractive pamphlet entitled "Progressive Horticulture," has reached our desk. We have looked this over with much interest, and congratulate you on promoting an important line of nursery development. There is one point, however, which ought to be made clear, namely, that in taking scions from individual trees which possess desirable characteristics, we are not *breeding* in the full and proper sense of the word; we are simply propagating selected strains. The act of propagation does not usually improve, it merely perpetuates. This is the law of asexual propagation. In breeding, we combine varieties sexually, and by the laws of breeding may improve a variety, that is get something better by combining the parents, or on the other hand, may secure an offspring with the less desirable characteristics of the parents perpetuated. Our point is that the word "breeding" should be associated with the breeding process, which combines individuals, and not with such selecting processes, however important, which you are apparently practicing, which merely multiplies individuals of desirable character.

The selection process is certainly a meritorious and desirable practice, and orchardists, as well as nurserymen, should give heed to those favorable variations which occur from time to time in orchard and nursery. Of course, it is not always safe to say that a given variation as expressed by improved color or increased size in a Baldwin, Spy, or Greening tree, will be faithfully reproduced when propagated by grafting and budding; for such a variation may be due to immediate environment, as favorable soil or abundance of plant food. But we can afford to 'take a chance' on this, and it is probable that the number of successes will much more than repay us for the labor involved. Therefore, our unswerving advice is to progress in this line as well as in the true line of breeding by sexual method, so

that progress in fruit culture shall constantly be forward and upward. It is most gratifying to note the fact that nurserymen in the country are focusing their attention upon this fundamentally important subject.

Nurserymen will sympathize with the
THE BENJAMIN CHASE COMPANY MILL BURNED Benjamin Chase Company in the heavy loss which visited their firm about the middle of December in the burning of their mill. John C. Chase is such a constant and useful attendant at nursery

conventions, and is so well versed in nurserymen's problems, that he has long been regarded as one of the fraternity. The fire occurred on Sunday, the eleventh of December, and had made such headway before discovery that control was impossible. The main building of the plant was 85 by 40 feet, four stories high, and to this was attached a wing 40 by 30, three stories high, and another 20 by 18, two stories. In the mill was stored a large quantity of kiln-dried lumber of first quality pine and cypress. More than a hundred thousand feet of this quality of lumber was destroyed, in addition to a large amount of the finished product. This plant was undoubtedly the best equipped mill and largest of its kind in the United States. The loss, partly covered by insurance, is heavy, but the company began plans for rebuilding the following morning, and we trust that by the time this note reaches our readers, the new building will be well under way.

MATRIMONIAL

Mr. and Mrs. Benjamin Newhall announce the marriage of their daughter Hazel, to Mr. William Harvey Stark on Thursday, the twenty-second of December, one thousand and nine hundred and ten, Glencoe, Illinois.

The groom is a son of President W. P. Stark of the American Association of Nurserymen and a graduate of Cornell University. After a stay of a few days in New York the young couple took steamer for the West Indies, expecting to return via Florida to their home in Louisiana, Mo., about February 1st, 1911.

[Concluded from p. 7]

The above are all by The MacMillan Company of New York. They may be obtained through this office.

We would also recommend "The American Apple Orchard," by Waugh, as giving a view of conditions and methods outside the irrigated section. This costs about \$1.00, and is published by the Orange Judd Company of New York. In addition to these, if the nurseryman can afford it, he should by all means purchase a copy of the "Cyclopedia of American Horticulture," also published by the Macmillan Company of New York, and edited by L. H. Bailey. This work is mentioned above.

Enclosed please find \$1.00 cash to apply on subscription to National Nurseryman for one year. We are starting a nursery here and think we will surely need this magazine. Kindly receipt and oblige, yours very truly, Cope Brothers, 58 Vine St. Salem, O.

A VOICE FROM KENTUCKY

Old Varieties

Editor NATIONAL NURSERYMAN:

There is no desire to say anything new about crown gall or root-knot, only to drop into a reminiscent mood, going back nearly seventy years. Fifteen or twenty years ago the writer knew nothing about these things, further than that an occasional tree of almost any kind might have a wart or knot upon its root or stem. In those innocent days, it was looked upon as such a visitation as might befall any man or animal.

The Lady apple is distinctively a French kind, dear to every Frenchman. Who brought the first to central Kentucky, I do not know, but prior to 1840 there were bearing trees. Now, my father knew the apple on its native heath, and was sure that the strain introduced was not the best; for it reproduced from seed with about the same certainty as Hestiescling or Henrietta-Lady, and he hastened to procure from his ancestors, the Baumans, then French, now German, the very best. This was about 1840-5. The fruit of the only tree in his collection was the joy of my childhood. I have been a manipulator of trees all my life, and with childlike curiosity enquired why Pomme d'Api, as my father called it, had these knots on the stem. He retorted by asking why the mountain cattle had pendants from their briskets, and I assumed that these peculiarities were natural to their kinds. The tree in our collection developed a gall some four inches larger than the trunk and all around it. This gall had a wonderful capacity to develop sprouts, and was a terror when attacked with mallet and chisel. When some fifty years of age it died, whether from the gall, old age, overbearing, or what-not, I do not know; but it was one of the last survivors of that orchard.

CROWN GALL

When crown gall came to be a menace, and after the passing of the state inspection law, Dr. Garman one day began looking for this new terror, and I at once told him that it could be found. The second Lady apple tree dug had a "blooming knot" upon it. We no longer grow Lady apple, not because we particularly fear this growth, but because it is not popular to have such a thing about. It is not held that crown gall is not to be feared, but that it is not necessarily fatal. This conclusion is further strengthened by experiments made with Miner and Weaver plum trees, affected with crown gall, closely cut out. They have done just as well as other trees not affected. Our experience is that crown gall is sporadic, that it may affect trees of any kind, nursery grown, or wildlings, but that land previously used for raspberries is especially to be avoided.

H. F. HILLENMEYER & SONS.

Lexington, Ky.

CONDITIONS IN CONNECTICUT

Editor NATIONAL NURSERYMAN:

There is a good demand for nursery stock throughout the East. Fruit growing is being boomed by farm papers and agricultural societies. Capitalists who have heretofore largely invested their money and energies in manufacturing or pursuits other than agricultural are now beginning to turn their attention to agriculture, mostly to fruit growing. Manufacturers are rushed with orders requiring increased number of operators, causing houses in cities to be scarce and rents high in price; but the electric roads are extending their lines from the cities in all directions for miles, enabling the mechanic to own a small place in the country where he can have a garden, a few fruit trees, some poultry, a horse and cow, and can go back and forth to work in the city on the trolley cars for about a cent a mile. All this means increased demand for nursery stock, and we see no immediate likelihood of the sales of nursery stock decreasing.

BARNES BROTHERS NURSERY CO.

Yalesville, Conn.

CONDITIONS IN ONTARIO

BROWN BROTHERS CO.

The general tone of business in our section has been very good. The demand for stock, especially apple, peach, and plum, has been all that we could ask, and the disposition of the fruit grower seems to be in the direction of expansion, with increasing alertness as to culture, varieties, and methods of packing and shipping. The English markets seem to have been actually brought nearer by this year's demonstration of the possibilities of refrigeration and pre-cooling as applied to peaches. The territory of the Northwest as well is being brought within reach by the same improved methods and the population of these vast areas can no longer be condemned to an Edenless existence.

Browns Nurseries, Ontario.

CONDITIONS IN OKLAHOMA

J. A. LOPEMAN.

Oklahoma has not been blessed with its accustomed amount of rainfall the past season. With the ground full of water in the spring, together with some light rains in April and May, the wheat and oats matured a fine crop. The drouth through June and July ruined the corn but cotton and broom-corn made a fair yield, and with prices good for all farm products, the country is in very good condition. Especially is this true of the farmers.

Nursery stock, notwithstanding the heat and drouth, made a very good growth and sales were good up to latter part of the summer. As fall approached with the drouth

(Continued on page 27)

FIELD STUDIES OF THE CROWN-GALL AND HAIRY-ROOT OF THE APPLE TREE

Important Bulletin. Investigations Still in Progress

Editorial notice was made of Bulletin 186, by George G. Hedgecock, pathologist in fruit disease investigations of the Department of Agriculture, in our last number. Additional reference is herewith presented on the ground of the extreme importance to nurserymen of this investigation. Mr. Hedgecock shows by "actual experiment that in the case of the milder and usual forms of the disease, little or no injury is appreciable in young orchards; that more intense forms may be injurious; but in orchard these rarely develop from the milder forms." He also indicates how the disease may be lessened if not eliminated by propagating methods.

The following recommendations are offered by the author as the gist of his findings in this investigation, which has covered a period of five or six years:

"The crown-gall and hairy-root of apple trees is primarily a nursery disease, gaining entrance most frequently the first year. In a well regulated nursery it is desirable to grow and sell the best trees that can be obtained and at the same time not increase the cost of production. With this in view the following recommendations are made:

(1) In order to keep the nursery as free as possible from the disease all diseased trees should be left in the field at the time of digging and burned as soon as dry.

(2) The nurseryman should, as far as possible, get scions from healthy trees by growing them under careful selection or purchasing them from others who do this. Never plant diseased trees in the scion orchard.

(3) Buy the best grades of healthy seedlings for budding and root grafting. Insist that growers of apple seedlings cull out and burn all diseased ones at the time of digging.

(4) Make close-fitting root grafts, avoiding blunt ends of the root and scion in the union. Wrap with unwaxed cloth or continuous-thread wrapping, covering completely and firmly the wounded edges in the union. The root and scion should be approximately of the same diameter.

(5) Store root grafts preferably in sand. If the period of planting is delayed beyond two weeks they should be placed in cold storage at a temperature a few degrees above the freezing point.

(6) Plant the union of root grafts about three to four inches below the surface of the ground. Be careful not to break the callus in planting and avoid wounding the young plants in cultivation.

(7) Propagate by budding, as far as possible, the few varieties most susceptible to crown-gall and hairy-root. Among these are the Wealthy, the Yellow Transparent, the Wolf River, the Ben Davis, and the Northern Spy.

(8) Avoid heavy, wet soils, since they favor an increase of disease.

(9) Growers of seedlings should avoid wounding the young trees with the hoe or other implements of cultivation.

That these precautions will decrease the disease is certain, as shown by the results of experiments, and an increased profit will result from their use. For example, wrapping with a close, tight cloth covering decreased the percentage of diseased trees 12.9 per cent and resulted in an increase of stand amounting to 23.9 per cent of the original root grafts planted. This, based on 15,000 grafts to the acre, is a saving of \$214.80 per acre. The continuous wrapping of root grafts with thread is more easily and cheaply done and promises to give equally as good results.

The orchardist is advised to plant the healthiest trees obtainable, since the initial cost of the orchard is only a small part of the final outlay. If a tree becomes diseased during the first three or four years so that its growth is hindered, dig it up and plant a healthy tree in its place. If trees in an older orchard are diseased, but still bearing profitable crops, allow them to remain in the orchard, unless there is danger of infecting more profitable plots of raspberries, grapes, or peaches. In such case they should be removed, since crown-gall from the apple tree may infect these plants.

If the growing of nursery stock were confined to apple trees, nursery inspection for crown-gall would hardly be necessary. Since the disease attacks and kills grapevines, raspberries, and probably peach trees, and since it may be communicated to them from apple trees, it is clearly the duty of a nursery inspector to insist that apple trees diseased with crown-gall shall not be sold. It is best to include in the same category apple trees diseased with hairy-root.

On the other hand, an inspector should be certain that apple trees are diseased with crown-gall or hairy-root before condemning them. Warts and pimples are not necessarily crown-gall, nor are fibrous roots certainly hairy-root. The tendency to form fibrous roots exists under certain soil conditions. In some localities and under certain soil conditions healthy trees with much-branched, fibrous roots are grown. These roots are to be distinguished from hairy-root formation, which is characterized at the beginning by clustered, fleshy, often fasciated roots, which later become fibrous through shrinking. Only plainly diseased trees should be rejected; other trees in the bundle should not be condemned on account of the presence of a diseased tree, but as a matter of precaution should be dipped in a weak solution of some antiseptic, as one-tenth of one per cent of corrosive sublimate, for five minutes and washed in water before planting."

ALABAMA STATE HORTICULTURAL SOCIETY.

The eighth annual meeting of this progressive society will be held in Birmingham, Alabama, Thursday and Friday, Jan. 19 and 20. An excellent program has been prepared, and a profitable meeting is expected. Secretary, P. F. Williams, Auburn, Ala.

Note and Comment

WHY SO FEW PECANS

The supply of pecans from Texas, Louisiana, and Oklahoma, instead of being larger than last year's, as was predicted some weeks ago, will be much smaller. Texas will probably ship 150 to 175 cars, while the amount forwarded from the other two states will not be sufficient to bring the total up to 200. The cause of this shortage is not apparent, but the result is an upward jump in prices after the low prices of the early part of the season.

PLAN A BIG ORCHARD

Martinsburg, W. Va., Dec. 1. Indicative of the increasing interest in apple growing in the Virginias, is the constant organization of new companies to develop orchards. John W. Stewart, who has four orchards of 2,000 to 6,000 trees each, and his associates have purchased a farm which was part of the old Lord Fairfax estate in Berkeley county, paying \$102 an acre. They propose to turn this into a great fruit orchard and will put out 10,000 apple trees. They now have twenty-five men at work on the ground. This property will be owned by a close corporation consisting of Mr. Stewart and one or two associates in Delaware and Maryland.

S. A. Moore of Philippi reports the organization of the Barbour Orchard Co., to develop 262 acres of land in that county on which he proposes to spend \$15,000 to \$20,000 in putting out apple and peach trees. The progress which the apple growing region of the South has been making the last few years is indicative of the great possibilities in that respect.—*New York Packer.*

THE FLOWERING GRAPE

Joseph Meehan, in *The Florists' Exchange* for November 19, 1910, calls attention to the flowering grape as a decorative feature of the landscape. The *Vitis cordifolia*, or Frost Grape, which does not bear fruit, was propagated many years ago on account of its flowers and its great fragrance. The only way to be sure of getting just what is understood by the term "flowering grape" is to take cuttings from a sweet-scented one that does not bear fruit. Any such wild vine which is found in spring to be satisfactory as regards fragrance, and is observed later not to bear fruit, can be propagated and sold as an ornamental.

THE RAILROAD AND THE WESTERN APPLE GROWER

Howard Elliott, president of the Northern Pacific Railway Company, in an address at the opening exercises of the Spokane apple show on November 14, urged his hearers, particularly those engaged in the business of fruit growing, to consider the importance of the railroad as a factor in the development of any section of country. He noted the fact that one of the direct causes of the present high cost of living is the greatly decreased percentage of the population engaged in agricultural pursuits, in other words, the enormous increase in the number of people who are consumers

only, and not producers of food. Taking as an example the Yakima and Kittitas Valleys of Washington, he estimated that the 185,000 acres of land there located are worth thirty times as much as they were previous to the establishment of the railroad in that section, and stated that whereas the railroad receives forty-eight cents for transporting a box of apples across the continent, it would cost probably ten cents to have this box of fruit hauled five miles by wagon in the district in which it was raised. [The farmer and fruit grower are painfully aware in many cases of their absolute dependence upon the railway. Last year for instance, while potatoes were selling at seventy-five cents retail in New York City, there was absolutely no sale for them in the hands of the producer in Maine and New York. The chief factor was the transportation charge.—Ed.]

FRUIT GROWERS' ASSOCIATION OF ADAMS COUNTY, PENNSYLVANIA

This organization does not believe in all work and no play; as at its three-days' meeting held in Bendersville in December, a program of music and readings, with one lecture, was arranged for the evening sessions. And some of the older societies might follow the example of the Adams County Association in another line; for, though this was only its sixth annual convention, the program and announcement for the year is one of the most attractive which has come to this office. The "display of farm and fruit products" was not confined to collections of high quality fruit, but included such things as infested twigs or fruit which might prove instructive. The addresses, aside from that of the President, Mr. Robert M. Eldon, Aspers, Pa., were all by men from outside of the state, fruit growers of nearby states, and officials of the Department of Agriculture at Washington.

ILLINOIS HORTICULTURAL INSTITUTE

Of especial interest and profit to Illinois horticulturists will be the institute held at the University of Illinois, Urbana, January 31 to February 10, 1911. On this occasion, the Illinois State Horticultural Society will have the co-operation of the Illinois Florists' Association, the Cook County Truck Growers' Association, the Illinois Outdoor Improvement Association, the Lake Forest Horticultural Society, and the Horticultural Department of the University of Illinois; and the annual meetings of several of these societies will take place on the last three days of the institute. There will be exhibits of fruit, vegetables, and flowers, and the varied subjects of horticultural interest which make up the program, while being presented by teachers and orchardists of wide experience, will still be practical and comprehensible to the beginner in fruit-growing work. Programs may be procured from W. B. Lloyd, Kinmundy, Illinois; J. F. Ammann, Edwardsville; August Geweke, Des Plaines, and E. Bollinger, Lake Forest.

The Western New York Horticultural Society holds its annual meeting in Rochester, January 26-27, 1911. A good program has been prepared.

ON THE ADAPTATION OF VARIETIES OF APPLES TO SOILS AND CLIMATES

A Very Important Factor

H. J. WILDER, United States Bureau of Soils

The influence of the soil factor on apple production has received little attention from fruit growers in the eastern United States during the development there of apple orcharding. The adaptations of certain varieties to the conditions of climate obtaining in specific regions have been studied, and data collected, which is a guide in some degree to variety selection, and a wealth of experience and experiment in orchard management are available; but if query be made as to soil selection it is most often dismissed, by the grower at least, with some such reply as, "Oh! a good corn soil is best," or "I prefer stony ground with good elevation," or some other similar characterization.

It is believed in fact, that in the selection of an orchard soil, chief consideration has been given to *where* it is rather than to *what* it is.

Variation in the yield of fruit per acre, however, as well as variation in its external appearance, quality and keeping characteristics, constantly point out that the soil factor may not be ignored. Field and orchard illustrations are virtually countless where the other essential factors, such as climatic conditions, drainage, exposure, fertilizers, etc., cannot satisfactorily account for the differences in varietal tree growth, nor for the range in the character of fruit produced.

There are several prime factors vital to the successful production of the tree fruits, and all of these must be considered in the investigation of any one of the factors. This is essential because no one factor or influence is a determinant, and it is imperative that each one of these factors be fitted into its proper niche, showing its relative position in the entire subject. It is not uncommon to find one orchardist who thinks that the point of chief consideration should be variety, another climate, another tillage or mulching, another spraying, and another fertilizers or what not. And while all of these elements are essential, no one is of much avail except in conjunction with all the others. So the character of the soil is of little importance if the trees do not receive proper care after planting, and yet all the other attributes will avail little if the soil be not well selected.

The fact that so little attention has been given to soil adaptation is due without doubt principally to the lack of opportunity for such study, and also to the difficulty in attacking the problem over a wide range of soil and climatic conditions. Yet in the production of other high grade crops—that is, crops bringing a high rate of return per acre, such as the tobaccos, onions, celery, flowers, and the various garden crops—it has been clearly demonstrated in our best agricultural practice that different characters of

soils have marked effect on the net returns of the crops. The best wrapper leaf tobaccos produced in this country, for example, are grown on fine sandy soils. The wrapper leaf must be extremely thin, and yet strong and elastic, so that a pound of them will wrap a large number of cigars, such as are produced on certain fine sandy soils, whereas a heavier or more clayey soil produces a thicker and more gummy leaf to which the trade objects. And so it is with apples. It is believed that soils differ greatly not only in their adaptation to apple orcharding in general, but also in their adaptation to different varieties of apples in particular. To state it another way—varieties of apples differ in their soil requirements, and any given variety within its own climatic environment is grown most successfully only on a somewhat restricted range of soil.

Outside this variety-region certain compensating factors may make the production of such variety feasible. The Baldwin, for instance, which originated in Massachusetts, and may be grown with success much more universally north of a line drawn from New York City to Pittsburg than anywhere else, is still a valuable sort for elevated areas from central Pennsylvania to northern Virginia. In this case the increased elevation compensates for the more southerly location where the mean temperature is higher, and maintains climatic conditions very similar to those of the Baldwin district described. As a result this variety is a commercial sort far south into Virginia when grown upon suitable soils; but the climatic factor is always in evidence, for with increasing distance south a higher altitude is necessary. At lower elevations the Baldwin becomes a fall apple, and as such it is not as desirable as other varieties. A slight exception to this statement, and yet one that strongly illustrates the effect of soil influence lies in the fact that if at the very point where the Baldwin tends to become a fall apple, it be planted on a soil somewhat heavier than the ideal, such departure from the normal soil off-sets in some degree the unfavorable change in climatic influence.

This is of importance only where the climatic departure is not very marked, a wide difference not being susceptible to amelioration by soil selection.

It has been the aim of the writer to work out as far as possible in the limited time available the soil requirements or preferences of a number of varieties, a few of which will be described.

BALDWIN

If soils are thought of as grading from heavy to light corresponding to the range from clay to sand, then soils grading from medium to semi-light fulfill best the requirements of the Baldwin.

Following definitely the classification standards of the Bureau of Soils of the United States Department of Agriculture, with reference to the proportions of clay, silt, and sands, this grouping would include the medium to light loams, the heavy sandy loams, and also the medium sandy loams provided they were underlain by soil material not lighter than a medium loam nor heavier than a light or medium clay loam of friable structure. The ideal to be sought is a heavy, fine sandy loam or a light mellow loam underlain by plastic light clay loam or heavy silty loam. Such soil will dry quickly after a rain, and would not be classed as a moist soil. It will never clod if worked under conditions at all favorable. The subsoil should never be heavy enough to impede ready drainage of excess moisture, yet sufficiently clayey to retain a good moisture supply; that is, it should be plastic not stiff.

If corn be grown on the ideal Baldwin soil the lower leaves will cure down before cutting time, giving evidence of moderately early maturity. This is one of the safe criteria by which to be guided in choosing soil for this variety.

Mention was not made of the color of the soil in the above description. The desirability of a surface soil of dark brown, the color being due to the presence of decayed organic matter, is unquestionable and generally recognized; and if the soil be not that color the successful orchardist will so make it by the incorporation of vegetable matter through the growth of leguminous crops, or otherwise. It is often cheaper to buy soil with a good organic content than it is to put it there after purchase. Hence this is purely an economic feature.

The warning should be stated, however, that a good soil should not be purchased or planted to apples of any variety because it is dark colored and rich in decayed vegetable matter. The soil should be selected because of its textural and structural adaptation regardless of the organic content; then if such soils are well supplied with humus, so much the better; if not, it may be supplied. The soil texture cannot be changed.

RHODE ISLAND

The soils adapted to this variety are very distinct from the Baldwin standard. In fact, these two varieties, considered as standards, differ so markedly in soil requirements that the soil adaptations of other varieties may be profitably compared with either the Baldwin or the Rhode Island Greening soil standard. A surface soil of heavy silty loam, or light silty clay loam underlain by silty clay loam excels for the Rhode Island Greening. Such soil will retain sufficient moisture to be classed as a moist soil, yet it is not so heavy as ever to be ill-drained, if surface drainage is adequate. It should be moist, but not wet. The soil should be moderately rich in organic matter, decidedly more so than for the Baldwin. In contrast to the Baldwin soil in the growth of corn, it should keep the lower leaves of the plant green until harvesting time, or at least until late in the season. Such soil conditions maintain a long seasonal growth under uniform conditions of moisture, and thus produce the firm yet crisp texture, the remarkable juici-

ness, and the high flavor for which this variety is noted when at its best. If grown on a sandy soil the Greening lacks fineness of grain, flavor, and the juicy quality, in greater or lesser degree, depending on the extent of the departure from those soil characteristics which contribute to its best production.

The Greening is also more restricted in area than the Baldwin, not adapting itself to the climatic conditions south of the Baldwin district, even though suitable soils occur there. In fact, its southern boundary may be roughly estimated as the forty-first parallel. South of that it becomes a fall apple and keeps very poorly.

HUBBARDSTON

Compared with the Baldwin soil requirements, the heaviest soils desirable for the Hubbardston lap over for a little upon the lightest soils desirable for the Baldwin, while at the other extreme the Hubbardston will utilize the most sandy soil of any of the varieties adapted to the region north of Pennsylvania. In that state, especially in the eastern part, the Smokehouse is similar in soil adaptation.

The above soil description for the Hubbardston does not mean that that variety will succeed on poor light sands, for on such soils the apple will not attain sufficient size to be of value, but the soil should always be very mellow. A rich, fine, sandy loam to a depth of at least a foot is preferable, and the subsoil may well be of the same texture. A subsoil containing enough clay to make the fine sandy material somewhat coherent, or sticky, is excellent; but there should never be enough clay present to render the subsoil heavy. If the soil is too heavy or too clayey the fruit is liable to have greasy skins, the color is deficient, and the flavor insufficiently developed. In common phraseology the soil should be such as to respond quickly to fertilizers, not the earliest soil, but one moderately early. The Hubbardston requires good air drainage and local elevation, and therefore should be grown on hills and slopes, or high bench land.

NORTHERN SPY

This variety is one of the most exacting in soil requirements. To obtain good quality of fruit, i. e., fine grain and juiciness together with high flavor, the soil must be moderately heavy, and for the first two qualities alone the Rhode Island Greening soil would be admirable. The fact that the Spy is a red apple, however, makes it imperative that the color be well developed and the skin free from the greasy tendency. This necessitates a fine adjustment of soil conditions, for the heaviest of the soils adapted to the Rhode Island Greening produce Northern Spies with greasy skins, and it is also extremely difficult to get a good color upon them. The habit of tree growth of this variety, moreover, is such as to require careful attention. Its tendency to upright growth seems to be accentuated by too clayey soils, if well enriched, and such soils tend to promote growth faster than the tree is able to mature well. On the other hand, sandy soils, while producing good color and clear skin, fail to bring fruit satisfactory in quality with respect to texture and flavor. Hence the soil requirements

of this variety are decidedly exacting, and are best supplied by a medium loam underlain by a heavy loam or light clay loam. It should not be planted on a soil lighter than a heavy, dark, fine sandy loam underlain by a light clay loam. Good air drainage is also very essential with this variety.

TOMPKINS KING

The Tompkins King is fully as exacting as the Spy in soil adaptation. The tree does not develop a satisfactory growth on sandy soils, but succeeds best on a moist, yet well drained soil, i. e., the light Rhode Island Greening soils—a soil capable of maintaining such supply of moisture that the tree receives no check at the approach of drouth. But the fruit grown on soils so heavy, lacks clearness of skin, and the appearance of the apple is marred by the greenish look extending far up the sides from the blossom end, and the lack of well developed color which makes this fruit at its best very attractive. Hence the problem is to balance these two opposite tendencies as well as possible, and soil of the following description seems best to do this: light mellow loam, the sand content thereof being medium rather than fine, thus constituting an open textured loam rather than a fine loam. The subsoil should be either of the same texture or only slightly heavier, in no case being heavier than a very light, plastic clay loam. Subsoils inclining towards stiffness in structure should be carefully avoided.

The varieties described cover for the climatic conditions that obtain in the so-called Baldwin district, the entire textural range of soils adapted to commercial apple growing. These five varieties are simply representative, and illustrate in soil requirements the range from heavy to light soils, from the Rhode Island Greening to the Hubbardston. Many other varieties are, of course, adapted to the soils of this district, and the range of adaptation of each particular variety may or may not be identical with, or partially correspond to, any of those described.

In a paper of this length it is impossible to describe in detail the soil requirements of very many varieties. Some fifteen other varieties have been studied in detail, within the general Appalachian region extending from New York to northern Alabama, which show plainly marked differences in varietal soil adaptations, but it was thought best for the purposes of this paper to describe only a group of varieties, which are of commercial importance in some given district. It has become apparent that a given soil is not equally well adapted to several varieties, but that it is best adapted to the production of some particular variety, or at most two or three closely related varieties.

As already stated the soil is a factor which has received little study as to its adaptation to different varieties, but the lack of uniformity of results with the different varieties as grown by leading successful orchardists make it evident that in the future careful consideration must be accorded to the soil problem, quite as much as to the various other factors essential in apple production.

Do not allow modesty or lack of business enterprise prevent you from advertising.

CONDITIONS IN OKLAHOMA

(Continued from page 22)

still holding everything in its grip, conditions took on a very discouraging appearance, and it would seem that collections must be poor. To our surprise, collections have been as good as in many years of the past. All kinds of nursery stock seem to be scarce throughout Oklahoma. Especially is this the case in peach and plum. Under ordinary conditions, we would have had plum and peach sufficient to fill all orders, but the grand and perfect crop of plum and peach stimulated the sales on these to such an extent that we had what might be termed a house-cleaning time. Taking it all-in all, our past season has been good and satisfactory and with our usual spring trade next spring, we will come out a little ahead of many of our past seasons' work.

NEW JERSEY STATE HORTICULTURAL SOCIETY

The thirty-sixth annual meeting of this Society was held at the State House, Trenton, December 14 and 15, 1910. The convention included five sessions. Besides papers from a number of the New Jersey State Experiment Station men and from horticulturists of the state, the program included an address by Prof. M. B. Waite of Washington on "New Sprays," and an illustrated lecture on "Modern Orchard Methods," by Charles E. Bassett, Secretary of the Michigan Horticultural Society. Premiums were offered on small collections of fruit, roses, violets, and carnations.

MASSACHUSETTS APPLES

As a result of the prize offers of the Massachusetts State Board of Agriculture for 1910, some interesting figures have been made public. Frederick A. Russell, of Methuen, received \$25 for the best yield of marketable fruit from a single tree, 56 bushels from one Gravenstein. His nearest competitors were C. W. Mann, of Methuen, with 44 bushels of Baldwins, and Rev. N. B. Fiske, of Danvers, with 32½ bushels of Wealthies. The Drew-Munson Fruit Co., Littleton, received first prize of \$50 for the best yield of marketable fruit from an acre of apple orchard trees in one solid block, 227 barrels of Baldwins. Next on the list was Rev. N. B. Fiske, 115 barrels of Baldwins. The first and second prizes of \$30 and \$20 for the best results from spraying went to Rev. N. B. Fiske and the Drew-Munson Fruit Co., respectively.

ANOTHER FRUIT GROWERS' ORGANIZATION.

On December 21, at Washington, D. C., representatives of fruit growing interests in the East met and organized the Eastern Fruit Growers' Association. Special attention was given to plans for co-operating with the various state horticultural societies and to unifying the present methods of marketing fruit. The officers of the new association are as follows: S. L. Lupton, Winchester, Va., president; Nat C. Frame, Martinsburg, W. Va., secretary; F. I. Oswald, Smithsburg, Md., treasurer, together with the following vice-presidents: James H. Harris, Stillpond, Md.; Stewart Bell, Winchester, Va.; G. L. Soper, Magnolia, Del.; C. B. Hart, Wheeling, W. Va.; R. M. Elden, Aspers, Pa., and A. T. Henry, Wallingford, Conn. The annual meeting will be held in Washington.

Obituary

TO THE MEMBERS OF THE AMERICAN WINE GROWERS' ASSOCIATION:
Gentlemen:

With deep regret we are obliged to announce our loss by death of two loyal and active members of this Association:

Mr. H. C. Roualet, of the Roualet Wine Company, San Francisco, Cal.

Mr. Roualet died on September 26th last at an early age of 44 years. He was born in France, came to this country in 1894, and gained a high reputation as an expert wine and champagne maker.

Mr. Bundschu died on September 30th in the 69th year of his age. He was born in Mannheim, Germany, in 1842, went to San Francisco in 1862, and became one of the pioneer wine growers and merchants of California. His death is a distinct loss to our industry.

The Committee, appointed by the President of this Association, to take notice of our loss, has passed suitable resolutions which have been sent to the trade press and the families of our deceased members. It is fitting that formal action should also be taken at the coming annual meeting of this Association.

Respectfully yours,
W. E. HILDRETH, *President*.
L. J. VANCE, *Secretary*.

A REMINDER

The editor of *Horticulture*, in the issue of that paper for December 3, calls attention to certain advantages and benefits in which the rank and file of florists—and the same is true of nurserymen—participate at the expense of a great amount of time and thought on the part of a few. The particular event to which attention is here drawn is the National Flower Show, to take place in Boston next spring; and the reader is reminded that this exhibition, like others of its kind, which have no small importance in aiding the progress of the industry throughout the country, is due to the untiring efforts of the few on whose shoulders the responsibility rests. Those to whom especial gratitude is owing in the present instance are the following gentlemen, composing the schedule committee and board of control for the National Flower Show, some of whom came long distances to meet with the local members in Boston recently: Messrs. F. R. Pierson, Benj. Hammond, Harry O. May, W. A. Manda, A. Farenwald, Wallace R. Pierson and F. H. Traudtly.

APPLES ARE STEADY

BARREL FRUIT MOVES WELL, BUT BOXES ARE IN EXCESSIVE OFFERING

New York, Dec. 2. The apple market is in fair condition. Receipts this week were not heavy and the demand was active. Prices are a shade lower than last week, however. Baldwins range from \$3 to \$4.25 for the No. 1's and No. 2's and something very fine sells up to \$4.50. Greenings sell according to quality from \$2 to \$5. York Imperials sell at \$3 to \$4.75.

Barrel stock is doing very well, but the box apple market is in a very bad condition. Offerings are very heavy, far in excess of the demand at anything like profitable prices. Box fruit is selling here at about what it costs at loading stations in the west. Jonathans, when they are fine, bring around \$2, as do also Spitz. The other varieties, which are not much sought after, sell from 75c a box up and poor Jonathans bring as low as \$1.25 to \$1.50, although they are in light offering.—*New York Packer*.

MARTINSBURG, W. VA., AGAIN

The name Martinsburg is being frequently heard in connection with new orcharding enterprises. The latest company to organize in that place is the Back Creek Orchard Company, which has just received a charter permitting it to carry on agricultural and horticultural operations near Hedgesville. Of the incorporators, only one, Mr. J. W. Wood, is from Hedgesville. The others are: G. F. Mikkleson, of Kensington, Md.; and A. S. Patterson, George T. Smith, J. A. Butler, J. W. Holloday, W. H. Ronsaville, all of Washington, D. C. The capital stock is \$75,000.

HAWKEYE

'Tree Protectors



Give dollars worth of protection at a fraction of a cent cost. Don't take a chance with your young trees. One rabbit will kill many in a single night. Protect yours with Hawkeye, the protector that rabbits, mice and other tree gnawers can't gnaw through—the protector that protects against cut worms and prevents trees becoming skinned or bruised by cultivator or lawn mower.

Hawkeye tree protectors are elm veneer chemically treated. They are easily applied to the trees and will last until the tree is beyond the need of protection.

The value of one tree is more than all the Hawkeye tree protectors you need will cost you. Send us your order before some of your trees are killed—You will regret it if you wait until too late.

Price in lots of 100 1 cent apiece
Price in lots of 1000 3/4 cent apiece

BURLINGTON BASKET CO.

120 Main Street, Burlington, Iowa

G. M. WESTLAND, Wenatchee, Wash.
State Agent for Washington.

WANTED

One prominent nurseryman to act as exclusive agent in each state of the Union. To such we will make prices and terms that will make the Hawkeye Tree Protector a profitable proposition. Our agents' names will appear in our ads in all the prominent fruit growers' papers. There is money in it for you. Write us at once.

BURLINGTON BASKET CO.

Burlington, Iowa

W. FROMOW & SONS

WINDLESHAM, SURREY, ENGLAND

Growers of Hardy Ornamental Nursery stocks; 250 acres under cultivation.

SPECIALTIES made of RHODODENDRONS, Golden PRIVET, TREE and DWARF ROSES, Etc.

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SPECIOSA CATALPA

Transplanted and cut back

Extra well rooted, 12 to 18 and 18 to 24. Special prices. Good assortment of Apple in 11-16 grade.

GREENWOOD NURSERIES

Greenwood, Ind.

WANTED

Working foreman on our nursery; also experienced budders and grafters to work by the year. Only steady and sober men wanted. State experience with references and what wages you would expect. Address,

W. T. HOOD & CO., Richmond, Va.

MASSACHUSETTS NURSERYMEN'S ASSOCIATION*(Continued from page 4)*

FOURTH: That these resolutions be spread upon the permanent records of our organization; published in the horticultural papers and the South Framingham News and a copy be sent, by the secretary, to the family of the deceased.

(Signed)

THEODORE F. BORST,
CHARLES R. FISH,
A. E. ROBINSON.

The election of officers for the ensuing year resulted as follows: President, W. H. Wyman, No. Abington; Vice-president, Theo. F. Borst, South Framingham; Secretary-treasurer, A. E. Robinson, Bedford; executive committee, J. Woodward Manning, Reading; J. W. Adams, Springfield; Chas. R. Fish, Worcester; Geo. C. Thurlow, West Newbury.

BROWN TAIL MOTH IN EUROPE

NATIONAL NURSERYMAN,
City.

Gentlemen:

Your many readers may be interested to know that on my recent trip to France I found absolutely no sign of brown tail moth either in or out of the nurseries and I shall be very much surprised indeed if any are found on stock imported this season. This condition should go far toward quieting the agitation carried on by the Agricultural Department at Washington in favor of a National Federal Inspection Law.

Yours truly,

Rochester, N. Y.

IRVING ROUSE.

AN EXAMINATION OF APPLE ORCHARDING IN NIAGARA COUNTY, NEW YORK

It is probable that Niagara county has not far from 1,000,000 apple trees in its orchards. Its apple production is sometimes the largest of any county in the state and rarely falls below second place. In the year in which the twelfth census was taken (1899), Niagara produced 1,421,796 bushels of apples. The apple orchards of the county amount to forty-six acres in each square mile. Bulletin 262 by the Department of Horticulture of the New York State College of Agriculture gives the results of a painstaking examination of these orchards. Their present condition in reference to drainage, tillage, fertilizing, insect enemies and fungous enemies is fully discussed. The results from different methods of spray treatment, together with the yields and money returns obtained, are set forth in this bulletin. The average income of the Niagara county apple orchards is in the vicinity of \$100 per acre. This is an excellent showing, but certainly not as favorable as can be made under the most approved systems of orchard management. The bulletin is issued in the interests of better apple growing methods in the state. It will be found valuable to fruit growers in Niagara county, but not more valuable to them than to apple growers in any of the apple growing regions of the state. Residents of New York State may obtain this bulletin by addressing, Mailing Clerk, New York State College of Agriculture, Ithaca, N. Y.

WISCONSIN APPLE LAND

The Gays Mills Fruit Farm & Nursery Company has recently been incorporated at Gays Mills, Wisconsin. The incorporators are: John A. Hays, O. A. Sherwood, and H. W. Stuckey, all citizens of Gays Mills, and the capital stock is \$20,000. Of one hundred acres of land acquired at Gays Mills to be set to apples in the near future, twenty-five acres will be planted next spring.

PENNSYLVANIA NURSERY CO.

Girard, Erie Co., Pa.

GROWERS OF A COMPLETE GENERAL LINE.

SPECIALTIES: Peach, Cherry, Plum, Currants, Grapes, Hedging, Ornamentals, Shrubs—some extra large. Plum Farmer Raspberry. Send us your want and surplus lists.

**80,000 PEACH TREES** For Fall Delivery

Also full line of nursery stock, including Red Oak, Berberis, Thunbergi, White, Austrian and Scotch Pine, Norway Spruce, Grapes, Currants, etc.

M. T. TWOMEY, - Franklin, Mass.**California Privet** PLANTS AND CUTTINGS BY THE MILLION

Write us for Prices

Oak Lawn Nursery Co.
HUNTSVILLE, ALA.

THE CURETON NURSERIES

We offer Terry's Winter, Stayman's Winesap, Mangum Bonum, Ben Davis, Yates, Ark. Black, Kinnards Choice, M. B. Twig and Poorhouse Apple trees, 2-3 ft., 3-4 ft., 4-5 ft. 5-6 ft. 1 yr. Elberta, Hiley, Gov. Hogg, Carman peach trees 1½-2 ft., 2-3 ft., 3-4 ft. Umbrella China, 5-6 ft. Tree Althea, 4-5 ft. Oriental Plane, 8-10 ft. Magnolia Grandiflora 1½-2 ft., 2-3 ft., 3-4 ft. Carolina Poplar, 6-8 ft. (branched), 8-10 ft. Amoor River Privet and Carolina Poplar Cuttings; Roses (bush); Roses (climbing); Yellow Jasmine vines; Cape Jasmine, 5-6 ft.; Chinese and Arborvitae; Spruce, 4 yrs. **WANTED**—Apple Seedlings and Scions. Write today and send us your orders. Perfect satisfaction guaranteed. No disease in our stock.

JAS. CURETON, Prop., Austell, Ga.**BLACK LOCUST**

SEEDLINGS, all grades, in car load lot or less.

Also Apple Scions in quantity.

Please let us have your want lists and also your offers of transplanting and other stock.

Cunningham Nursery Co.
RISING SUN, IND.

The Quiz Column of The National Nurseryman is open to its subscribers who are invited to use it freely.

Catalogues Received

B. G. Pratt & Co., 50 Church St., New York City. "Modern Methods of Harvesting, Grading, and Packing Apples."

Turkey Creek Nurseries, Macclenny, Fla. Descriptive catalogue, 1910-1911, of nut trees, ornamentals, shade trees, fruit trees, etc. Profusely illustrated.

Henry F. Michell Co., 518 Market St., Philadelphia. Preliminary offer Michell's "Distinctive" seeds and bulbs for florists, crop 1910. Special offers to florists and dealers in Christmas greens.

The Munson Nurseries, Denison, Texas. Catalogue of fruit and nut trees, shrubs, etc. Cover shows a bunch of Captivator grape.

Griffing Brothers Co., Jacksonville, Fla. Griffing's tree catalog, 1911. An attractive publication of fifty pages. Cover shows pecans used for roadside planting, in colors.

Huntsville Wholesale Nurseries, Huntsville, Ala. Price list for the trade only, December, 1910.

D. W. Babcock, Berlin, Md. Trade bargain list of choice forest and fruit tree seedlings and seed, perennial plants, dahlia and gladioli bulbs, fall, 1910.

Summit Nurseries, Miller & Gossard, Monticello, Fla. Illustrated catalogue and price list.

L. J. Farmer, Pulaski, N. Y. Descriptive trade price list.

Lewis Roesch & Son, Fredonia, N. Y. Wholesale price list of grape vines, small fruits, etc., for fall, 1910.

Valdesian Nurseries, Bostic, N. C. Price list for fall, 1910.

J. B. Pilkington, Portland, Ore. Illustrated catalogue for 1911.

FOREIGN CATALOGUES

Barnham Nurseries, Ltd., Barnham, Sussex, England. Trade catalogue, of fruit trees, roses, and general nursery stock.

A. Couteau, "The Golden Harc" Nurseries, Orleans, France. Special offer of roses.

Walter Charles Slocock, Goldsworth "Old" Nursery, Woking, Surrey, England. Wholesale catalogue, 1910 and 1911, of coniferae, hardy evergreen and deciduous shrubs, rhododendrons, fruit trees, transplanted forest trees, etc.

E. Turbat & Co., 69 Route d'Olivet, Orleans, France. Wholesale list of roses and nursery stock, for autumn, 1910, and spring, 1911.

W. Fromow & Sons, Windlesham, Surrey, England. Catalogue of rhododendrons, the specialty of these nurseries, coniferae, hardy evergreen and deciduous trees and shrubs, etc.

Hommo Ten Have, Schmeeda, Holland, only special grower of westernwolds ryegrass-seed. Description of this seed.

Greenewegen & Son's Nurseries, De Bilt, Holland. "Holland Abroad," published by the Bureau for the Promotion of Dutch Commerce and Industry, Damrak 60, Amsterdam. A ten page publication with illustrations, being views on the nursery grounds, and views of some of the individual products of the nurseries.

Sluis & Groot, Enhuizen, Holland. Advance price list of vegetable, flower and agricultural seeds.

Matthew W. Smith. The Forest Nurseries, Darley Dale, near Matlock, England. Trade list of nursery stock.

John Hill & Sons, Spot Acre Nurseries, near Stone, Staffs, England. Trade catalogue of Hardy Ornamental Trees and Shrubs, Forest Trees, pot Shrubs, etc.

Wm. Paul & Son, Waltham Cross, England. Wholesale Catalogue of Roses, Fruit Trees, Deciduous trees and shrubs, etc.

Wm. Learmont & Son, Larchfield Nurseries, Dumfries, Scotland. Wholesale list of Nursery Stock.

John Dimmick, The Nurseries, Ryde, Isle of Wight. Trade list of nursery stock.

King's Acre Nurseries, Ltd., Hereford, England. Trade catalogue of Fruit Trees, Roses, Clematis, Ampelopsis, etc.

H. Den Ouden & Son, The Old Farm Nurseries, Boskoop, Holland. Supplement of wholesale price list of young evergreens.

Dervae Freres, Wetteren, Belgium. Catalogue and price list for autumn, 1910, and spring, 1911.

WANTED To communicate with a thoroughly reliable and experienced man in the sale of ornamental nursery stock, competent to assume charge of a portion of our retail trade. Address, **SOUTHWORTH BROS., Beverly, Mass.**

WANTED Experienced man who understands the growing, propagating and packing of nursery stock and who is capable of handling men working under him. A steady place to the right man. State age, experience, and names of previous employers, with wages expected.

Address, **ROSEDALE NURSERIES, Tarrytown, N. Y.**

NURSERYMAN WANTED in Omaha and Douglas County.

175,000 population without a large nursery. Splendid opening for experienced nurseryman with capital. We have a choice location to rent him at low rent with large building for storage house. Correspondence invited.

N. P. DODGE & CO., 15th and Harney, Omaha, Nebr.

WANTED MARCH 1st, experienced nurseryman. Married man preferred. Steady work, good position for right man. Give particulars, salary wanted, full description and references in first letter.

PRINCETON NURSERY
Princeton, Ind.

KALLEN & LÜNNEMANN
BOSKOOP, HOLLAND

Cable for prices

Address Kallen Boskoop, A. B. C. Code 5th ed.

Your attention is asked for a **SURPLUS** of splendid, thrifty 1 yr. old Applestocks. Few HUNDRED THOUSAND yet to offer in 5-7 and 7-10 grade. Bargain for sure! Price regulated by fact, that surplus must be disposed of. Samples were sent to various firms in America, some of which bought, others expressed their satisfaction on quality of sample. Surplus same quality. Cable expense refunded, where orders are placed.

GUST. LÜDEMANN, The Nurseries
HALSTENBEK, nr Hamburg, (Germany)

Established 1878

offers

in A1 quality, Abies Douglasi (Oregon) 1 year seedling; Larch, 1 year seedling; Norway Spruce, 2 year seedling; Beeches, 2 year seedling; Oak, common two year seedling.

First class quality, lowest prices, best shipping facilities via Hamburg.

MOST EVERYONE HAS A HOBBY

Ours is propagating new varieties of Strawberries

After a thorough testing and found to be an all around, best of all, you hear us warble. Otherwise we bury them. Our catalogue for 1911 is brimful of new ones and conspicuously absent of varieties that have been, but can not come back. Early, mid-season and late varieties. We were the propagators and introducers of the famous "Stevens Late Champion." A book on Strawberry Culture mailed with every catalogue free for the asking.

J. G. GARRISON & SONS, Bridgeton, N. J.

HELP WANTED

Two first-class competent landscape-nurserymen to wait on trade and superintend spring planting, with opportunity to enter propagation and other special lines in greenhouses or nursery. Give reference and experience. By established growing concern in large western city. "Western" care of NATIONAL NURSERYMAN.

2 Million Privet Cuttings
HARRY B. EDWARDS, Little Silver, N. J.

CONNECTICUT HORTICULTURAL SOCIETY

At the recent annual meeting of the Connecticut Horticultural Society the following officers were elected: President, John F. Huss, of Hartford; first vice-president, J. A. Weber, of Hartford; second vice-president, Alex Cumming, Jr., of Hartford; third vice-president, Carl Peterson of West Hartford; county vice-presidents, New Haven, John H. Slocombe, of New Haven; Middlesex, Arthur A. Curtis, of Deep River; New London, Charles T. Beasley, of Norwich; Litchfield, Walter Angus, of Chapinville; Tolland, Chauncey Turney, of Rockville; Fairfield, Charles H. Plumb, of West Redding; Windham, F. M. Smith, of Willimantic; secretary, George W. Smith of Melrose; treasurer, W. W. Hunt, of Hartford; librarian, William T. Hall, of Hartford; botanist, George W. Smith, pomologist, C. H. Sierman, of Hartford; executive committee, James M. Adams, J. A. Weber, C. A. Helfricht, and Francis Roulier, all of Hartford, and W. H. Shumway, of Berlin.

Held at Hartford, Conn., Dec. 9th. 179 members, 22 life members. Owns \$1,300 worth of Aetna Life Ins. Co. stock. Influence widening throughout the state. President Huss is a native of Switzerland, and now superintendent of the sumptuous estate of James J. Goodwin, of Hartford. The name "Plumb" above, should be Plump. Mr. Plump is secretary of the Agri. Experts' Association of N. Y., but resides in Conn. J. A. Weber is superintendent on the grounds of Walter L. Goodwin, Hartford. Alex. Cumming, Jr., is superintendent of Elizabeth Park, Hartford. Carl Peterson is manager of the extensive greenhouses of Miss H. F. Whiting, West Hartford.

GEORGE W. SMITH, Sec.

AMONG THE EXPERIMENT STATION WORKERS

MINNESOTA—Bulletin NW. 93 of the entomological division of this experiment station comprises 168 pages of matter describing the diptera or two-winged flies affecting farm garden stock and the household. In this group there are a number of very important pests. The Hessian fly, for instance, bot fly, as well as the ubiquitous house fly.

CANADA—Inland Revenue Dept. The chemical division of this department has recently issued an interesting bulletin on patent medicines and head-ache powders. They have analyzed a number of proprietary compounds such as Peruna, Paine's Celery Compound, Burdock Blood Bitters, Sarsaparilla, and many others. Among the interesting facts deduced is the per cent. of alcohol which these medicines contain. For instance, Peruna is shown to contain 22% of alcohol, by volume, Paine's Celery Compound, 18%; Burdock Blood Bitters, 16%; standard Sarsaparilla, 17%, and so on. It looks as if the alcohol were a pretty important constituent of some of these widely advertised and extensively used patent nostrums.

MISSOURI—An interesting bulletin entitled, "The 'Sting' in the Apple," comes to our table from this station. The "sting" refers to the result of the work of the plum curculio and is described by J. M. Stedman, Entomologist. Mr. Stedman charges this insect with malforming many apples by puncturing the skin for the deposition of its egg. In addition to the injury caused by the female in placing her egg, the males also spoil the fruit by feeding upon it throughout the season. While there is only one brood during a season, yet the young curculio emerge from the early fallen apples and feed upon the remaining apples of the tree during the remaining part of the summer, and in this way may cause considerable damage.

The author recommends that the trees be sprayed once or twice with arsenate of lead, before the blossoms open, and three or four times afterwards at intervals of ten days. The fallen fruit should also be collected once a week. These two supplemented by a stirring of the soil with a harrow once a month up to the middle of August, will do much to keep the insect in control.

Let one of your expenditures, early in the new year, be a subscription to the NATIONAL NURSERYMAN. You will find much to interest you in its pages. Do it now, lest you forget.

P. OUWERKERK,

No. 216 Jane St., Weehawken Heights, Hoboken, N. J.

Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our HOLLAND NURSERIES. Some of the goods on hand here during the packing season.

BOX STRAPS

WARD-DICKEY STEEL COMPANY

Manufacturers of Planished Sheet Steel

INDIANA HARBOR, IND.

GRAPE VINES

We offer for Fall and Spring delivery the largest and most complete stock of GRAPE VINES in strong grades for nurserymen and dealer's trade.

We also have an extra fine block of President Wilder currants which have made a strong growth.

SEND LIST OF YOUR WANTS FOR PRICES

T. S. HUBBARD COMPANY

Established 1866

FREDONIA, N. Y.

WE issue to members a Credit List with quarterly supplements. The list now contains between 7000 and 8000 names. Membership fee \$10.00, including privilege of obtaining unlimited number of ratings at cost. We also collect accounts at standard rates.

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Peach Trees
and Strawberry Plants

all leading market sorts for Fall 1910 and Spring 1911

MYERS & SON, Bridgeville, Del.

The Southwestern Nursery Co.

of OKEMAH, OKLAHOMA

will have for late Fall and early Spring an exceptionally fine lot of ONE YEAR APPLE, PEACH, PLUM and BUDDED ROSES; TWO YEAR CALIFORNIA PRIVET, CAROLINA POPLARS, and CATALPA SPECIOSA

WE INVITE YOUR INSPECTION.

Easterly Nursery Co.,

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Offers for Spring Shipment:

One, Two and Three-year Apple, Two-year Kieffer Pear, Two-year Sour Cherry, One-year Peach in car-load lots. A good assortment of Japan Plums, one-year and Mariana Stocks. Ask for prices.

A BARGAIN IN STANDARD PEARS

Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere Address,

PIONEER NURSERIES COMPANY,

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ORNAMENTAL STOCKS

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420 ACRES

WE GROW

FRUIT TREE STOCKS—All Sizes.
300 varieties of Conifers, 1 to 4 years old.
1200 varieties of Ornamental Trees and Shrubs, 1 to 3 years old.
1600 varieties of New and Old Ornamental Trees & Shrubs in all Sizes.
250 varieties of Climbing Plants.
400 varieties of Conifers, 1 to 4 feet high.
400 varieties of Perennials.
800 varieties of New and Old Roses.

We Have No Agents.
Write direct to us and
ask for **WHOLESALE
CATALOGUES**

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16 Route d'Olivet

BARBIER *and* CO., Successors,

Orleans, France

MANETTI

In another month you will need good stock for grafting. We have just what you want. Place your order now so that you can get it when you need it.

For December and January Delivery

Write for prices at once. Why not let us book you for your supply of dormant
Roses, Vines and Shrubbery?

Vaughan's Seed Store

Greenhouses, Nurseries and
Trial Grounds, Western Springs, Ill.

84-86 Randolph St., Chicago. 25 Barclay St., New York

Our Guarantee is just as big and broad as YOU choose to make it.

“SCALECIDE”

applied to your fruit trees will absolutely kill SAN JOSE SCALE and all Fungous troubles controllable in the dormant season. Five years of proofs.

Prices: In barrels and half-barrels, 50c per gallon; 10 gal. cans, \$6.00; 5 gal. cans, \$3.25; 1 gal. cans, \$1.00. If you want cheap oils, our “CARBOLEINE” at 30c per gallon is the equal of ANYTHING ELSE.

Send today for free Booklet, “Orchard Dividend—Modern Methods of Harvesting, Grading and Packing Apples.”

B. G. PRATT COMPANY, Mfg. Chemists, 50 CHURCH ST., NEW YORK CITY

ENGLISH NURSERY STOCK

EXTENSIVE STOCK OF CONIFERS, including a quantity of well-shaped specimens for decorative purposes. Low prices can be quoted on all Conifers. **HARDY ORNAMENTAL EVERGREEN AND DECIDUOUS TREES. ROSES**, Standards, Dwarfs and others. **MANETTI** and other **ROSE STOCKS. FRUIT TREES** in large quantities. Transplanted **FRUIT TREE STOCKS. RHODODENDRONS** and other **AMERICAN PLANTS**. (A good stock of all hardy varieties of Rhododendrons). **CLEMATIS** and other **HARDY CLIMBING PLANTS**. Transplanted **FOREST TREES**. The stock is in excellent condition this season. **FIRST GRADE STOCK ONLY SUPPLIED.** 30 years' successful trading in the States. No Agents. Write direct for wholesale catalogue.

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Half-hour's rail from London by L. & S. W. Ry.
Main Southampton Line;

GOLDSWORTH NURSERY, Woking, Surrey, Eng.

When writing to Advertisers please mention The National Nurseryman.

Fungous Diseases of Plants

By BENJAMIN MINGE DUGGAR

Professor of Plant Physiology in Cornell University

This book is designed to serve as a substantial reference book and is the result of special experience in the study of the practical aspects of plant pathology. There is a comprehensive discussion of the chief fungous diseases of cultivated and familiar plants.

Each disease is discussed with reference to its occurrence, the nature of the lesions or processes induced, the structure, life history, and cultural relations of the casual fungus, and practical methods for prevention or control.

The literature of the subject is freely cited, and a host index provides a ready reference to all of the important fungous diseases occurring upon any host. The method of treatment followed is intended to facilitate and stimulate the work of the nurseryman and practical fruit grower and to enlarge the interests of the general reader. The book is very fully illustrated from photographs and from drawings especially made for this work.

8 vo. 508 pages, Illustrated.

\$2.40. Trade Edition.

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LARGE STOCK, BOTH SEEDLINGS AND TRANS-PLANTS, OF

SPRUCE
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FOREST TREE SEEDLINGS

IMMENSE STOCK OF SEEDLINGS AS FOLLOWS:

CATALPA SPECIOSA
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WILD BLACK CHERRY

*Advance Price List of Evergreen and Forest Tree Seedlings
now Ready*

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EVERGREEN SPECIALIST

DUNDEE, ILLINOIS

Save Your \$ \$ \$

Buy your **Cherry** of a Cherry grower.

We can **save** you the **middle man's profit** and **deliver** you trees equal to the **best**. All grades in **car lots** or less. Our **Cherry** are **fine**.

We will also have our usual assortment of Fruits both large and small.

**Shades, Shrubs, Perennials
and Forest Tree Seedlings**

Want Lists will receive immediate attention

C. M. Hobbs & Sons

BRIDGEPORT, IND.

William Street Nurseries

We have a large surplus of the following stock:

**CHERRY, PLUM, PEAR and QUINCE—
2 year, all grades.**

**MAPLE—Norway, Silver, Weirs Ct. Leaf
CUT LEAF BIRCH**

HYDRANGEA—Bush and Tree

H. P. ROSES and CLIMBERS

**CLEMATIS—Large Flowering and Panic-
ulata**

CALIFORNIA PRIVET

A GENERAL LINE OF SHRUBS

Dealer's lists especially solicited for quotation.
All stock in storage ready for early Spring Shipment.

RICE BROTHERS CO.

GENEVA, N. Y.



Everything in

Small Fruit Plants.

Ask for price list.

W. N. SCARFF, New Carlisle, O.

F. J. GROOTENDORST & SONS, BOSKOOP HOLLAND

Complete line of high-grade Ornamental Trees, Shrubs, Evergreens, Herbaceous Plants and Bulbs. SPECIALTIES: Acer, Aesculus, Ampelopsis, Andromeda, Aristolochia, Azalea, Betula, Buxus, Clematis, Daphne, Dielytra, Fagus, Funkia, Hydrangea, Kalmia, Magnolia, Paconea, Phlox, Quercus, Rhododendron, Roses, Salix, Tilia, Ulmus, Conifers.

Catalogue on application.

Write us for estimates of total cost and full information about importing.



Small Fruit Plants for the Nursery Trade, Spring 1911

Black and Purple Raspberry Tips, Red Raspberry, Blackberry, Dewberry, Strawberry, Gooseberry Layer Plants, 1 and 2 years Layered, Orange Quince, Gooseberry and Currant Cuttings, Asparagus, 1 and 2 year old, Horseradish, Rhubarb 1 and 2 year old Roots, also divided Roots. Write for prices.

P. D. BERRY, Dayton, Ohio

TWO-YEAR OLD CAROLINA POPLARS,
4 feet and up. Also Cuttings by the 1000 or 10,000. Send for price. W. C. BRYANT, Nurseryman, Dansville, N. Y.

The Globe Nurseries

BRISTOL, TENN.—VA.

OFFER

40,000 2-yr. Apple for Early Spring Delivery

Nice, clean and smooth stock

Heavy on Yellow Transparent, Early Harvest, Red June, Red Astrachan, N. W. Greening, Stark, York Imperial, Smith's Cider, Winesap, Ben Davis, Arkansas Black, Magnum Bonum, Reagan's Red and Mo. Pippin.

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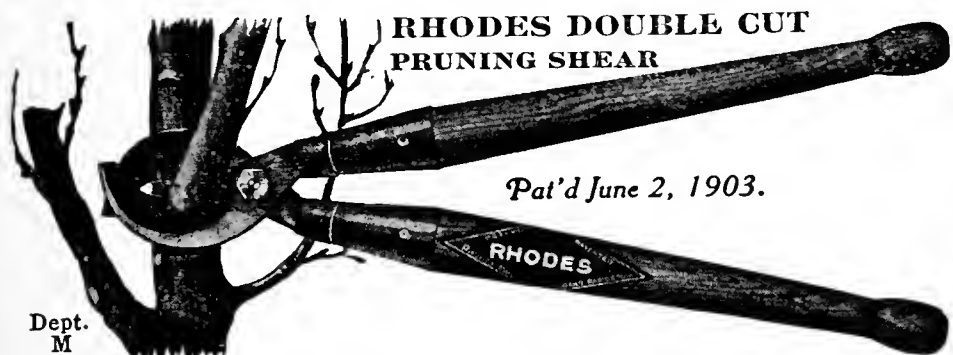
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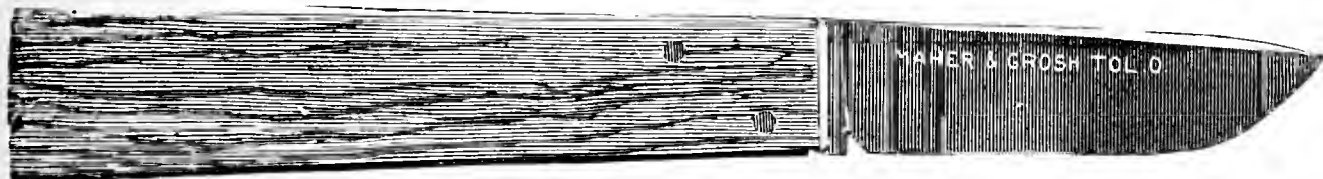
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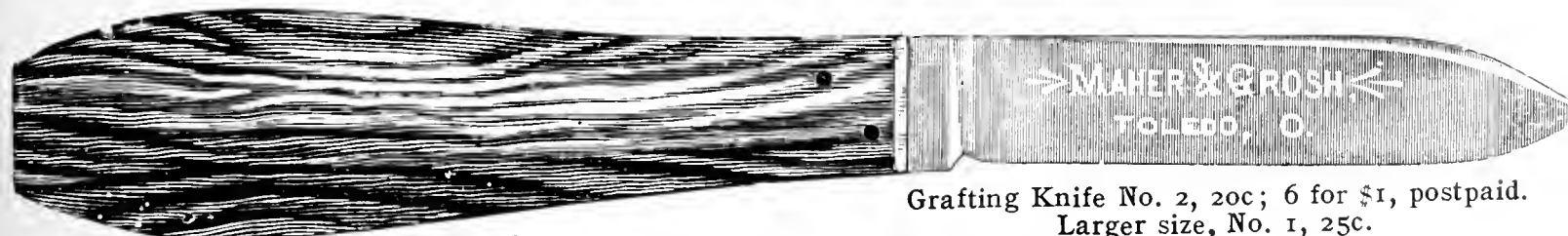
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E. TURBAT & CO., Orleans, France

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**The National Nurseryman
Publishing Co.**

ROCHESTER, N. Y.

GRAPE VINES

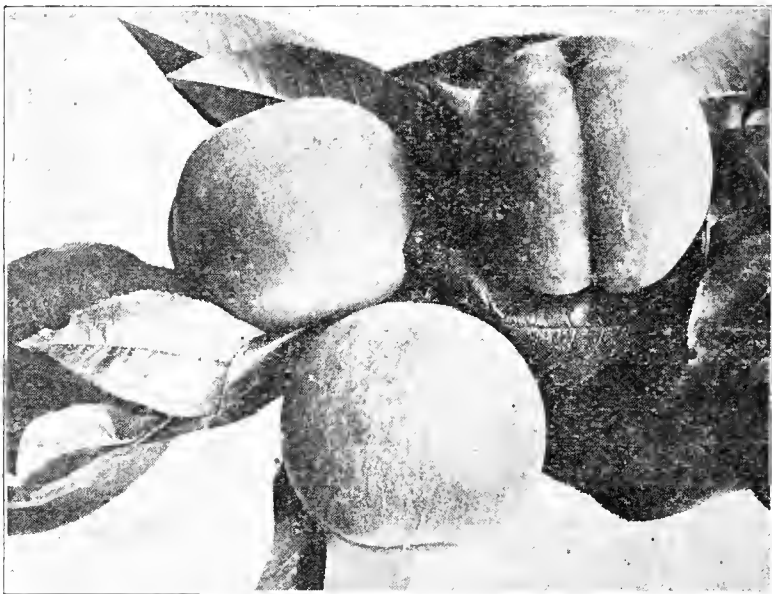
Our annual plantings of Grape Vines have for many years been

Largest in the World!

Gooseberries and Currants are our other specialties.

WE TRY to be progressive in adopting all new methods and machinery which will do our work quicker and cheaper. With faithful care and cultivation and generous fertilization we are managing to grow high-grade stock. : : : Our continual increase of nursery trade for more than thirty years seems to be the result of our methods and ways of doing business. : : : : : : : : : :

GEO. S. JOSSELYN,
FREDONIA, N. Y.



OLDMIXON

Mountain Rose—Large; red; flesh white, juicy, rich and excellent; one of the best early peaches. Should be in every collection. Freestone. First of August.

Oldmixon—Large, pale yellow, with red cheek; tender, rich and good. September.

Stump the World—Very large, roundish; skin white, with a bright red cheek; flesh white, juicy and good. Freestone. Last of September.

APRICOTS.

AMERICAN VARIETIES.

Acme—A free and vigorous grower, exceedingly hardy and productive. Fruit of large size, yellow, with red cheek, good quality; freestone. August.

Harris—Free; hardy; comes into bearing young, and very productive. Fruit large, rich golden yellow; ripens middle of July.

Moorpark—One of the largest; orange, with a red cheek; firm, juicy, with a rich flavor; very productive. August.

RUSSIAN VARIETIES.

Alexander—Tree hardy; an immense bearer; fruit large, yellow, flecked with red; very beautiful, sweet and delicious. July.

GENERAL CATALOGUE

Gibb—Tree hardy and symmetrical; a good bearer; fruit medium, yellow; sub-acid, rich, juicy, the best early variety, ripening about with strawberries; last of June.

J. L. Budd—A hardy, strong grower and profuse bearer; large, white with red cheek; sweet, juicy, extra fine, with a sweet kernel as fine flavored as the almond; the best late variety. August.

QUINCES.

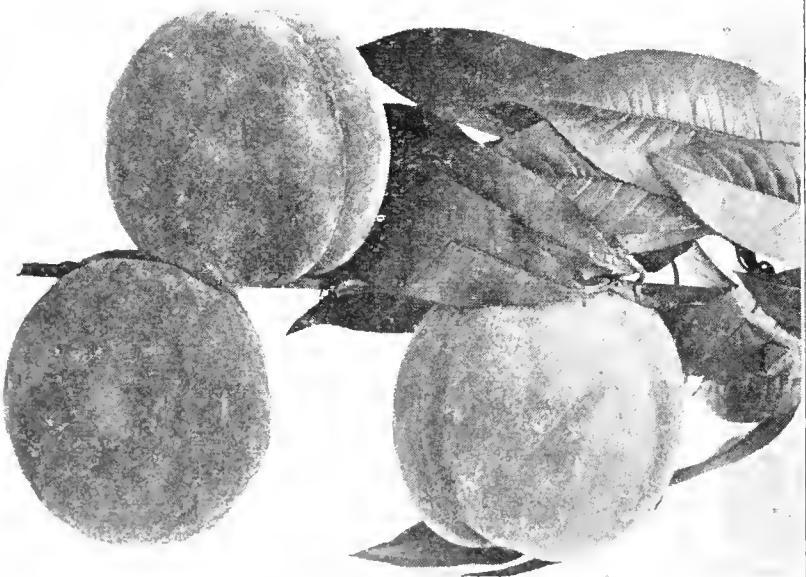
Bourgeat—Rich golden color; smooth skin, with delicious quince odor.

Missouri Mammoth—Rich and aromatic, one of the largest and handsomest. Bears young and prolifically.

Orange (Apple)—Fruit, large, round, with a short neck; color bright yellow; flesh firm and tough until cooked, when it becomes tender, juicy, and of excellent flavor.

Rea's—The largest and in every respect the finest variety of the quince.

Van Deman—A strong grower, the hardest, surest and youngest bearer. Fruit golden, big, fine flavored. Tree productive.



ELBERTA

A PAGE FROM OUR STOCK CATALOG.

Send for Sample Copy.

W. F. HUMPHREY, 32 Linden Street, GENEVA, N. Y

Established 1820



N. G. B. DEXTER.

Incorporated 1880

THE DEXTER GRAFTING TWINE

Especially Prepared for Nursery and Greenhouse Grafting

Put up in boxes containing 20 balls. Also furnished on cones of one pound, bleached or unbleached. This yarn is so wound that it can readily be soaked in hot wax, and is so twisted that it is strong enough to wrap without breaking, yet is easily broken when the winding is completed.

Also a Special Twine on Balls or Cones for the Bell Graft Wrapping Machine

Samples and prices furnished upon request

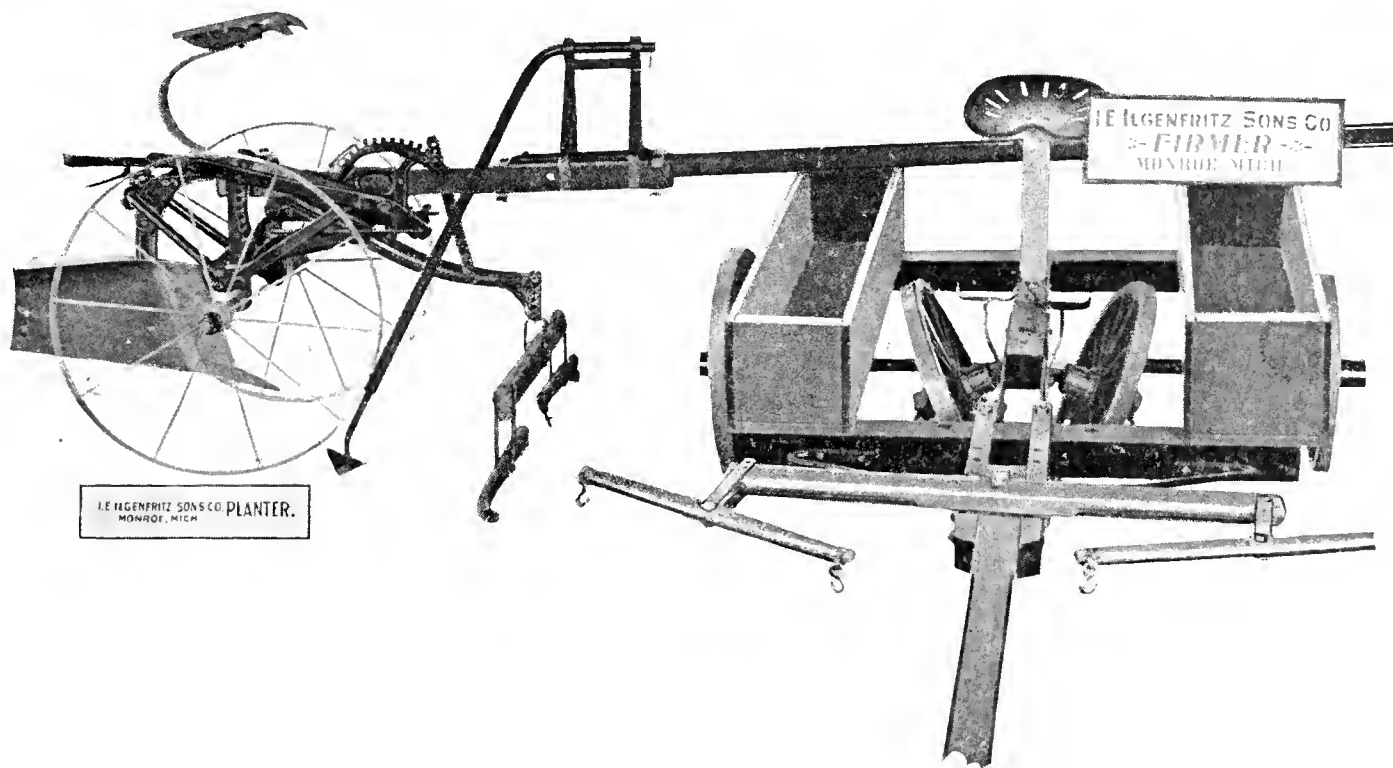
DEXTER YARN CO.,

Dept. G.,

Pawtucket, R. I.

I. E. ILGENFRITZ' SONS COMPANY PLANTER AND FIRMER

**Great
Labor
and
Time
Saving
Devices
for
Nursery-
men**



**Better
and
More
Uniform
Stands
of Stocks
Grafts
Cuttings
Etc.
at Less
Cost**

Write for descriptive circular, with testimonials from leading nurserymen of 17 states of the Union.

If they can't get along without them, can you?

TAKE THIS MATTER UP AT ONCE. Have machines for spring planting.

I. E. ILGENFRITZ' SONS CO.

The Monroe Nursery, - - Monroe, Mich.

(See our other ad., this paper)

Strawberries for Home Use and for Market; Sell Your Customers Harrison's Plants== Help Them Get Surest Returns from Every Bed

Illustration from our new Retail 1911 Catalogue, page 6



**Bed of Strawberries Set With
Harrison's Plants. We Have Millions
More, Just as Good, For Your Trade**

Teach your customers to buy strawberry plants that will give *real* satisfaction; that succeed, when *they* plant them, because they were grown by specialists in strawberry culture. We are entitled to be called that, because we grow so many plants, and grow them so well. We have millions of plants ready *now*—here are a few reasons why you should supply your 1911 trade from our enormous stock:

Large quantity grown—we devote one entire farm to producing strawberry plants. This assures your customers the choicest selection obtainable anywhere.

Selection of varieties—we offer about 75 sorts, each of which we *know* to possess special advantages either as a home or market variety.

Skill in growing plants—we are extensive growers and shippers of strawberries ourselves, and take our plants from the same fields from which we

sell. Our stock is exceptionally strong and vigorous with fibrous roots, and produces fine, large, well-flavored berries.

Let us quote prices on strawberry plants and whatever else you need for your spring trade. Drop us a postal now for trade list, with prices to move the stock *quick*!

LIST OF SURPLUS STOCK, WINTER AND SPRING, 1911

STRAWBERRY

We Have Over Ten Million Plants

120,000 Aroma	120,000 Lady Thompson
30,000 Auto	23,000 Mark Hanna
52,000 Bederwood	120,000 Mascot
10,000 Bismarck	125,000 Millionaire
52,000 Brandywine	186,000 Michel's Early
834,000 Bubach	42,000 New York
27,000 Chipman	54,000 New Home
310,000 Crescent	79,000 Nick Ohmer
440,000 Duncan	30,000 Norwood
138,000 Ea. Hathaway	72,000 Oak's Early
54,000 Ekey	88,000 Oswego
68,000 Excelsior	220,000 Sample
45,000 Fairdale Giant	118,000 Sen. Dunlap
200,000 Fendall	240,000 Sharpless
2,456,000 Gandy	120,000 Star
188,000 Glen Mary	20,000 Stephens' L. C.
400,000 Haverland	75,000 Superior
30,000 Johnson's Ea.	248,000 Tennessee
2,280,000 Klondike	330,000 Warfield

CALIFORNIA PRIVET

1000, 7 to 8 ft.	50000, 2 to 3 ft.
2000, 6 to 7 ft.	50000, 18 to 24 in.
10000, 5 to 6 ft.	50000, 12 to 18 in.
20000, 4 to 5 ft.	10000, 6 to 12 in.
50000, 3 to 4 ft.	
American Elm—	
50, 8 to 10 ft. high, 1 1/4 in. diameter.	
1000, 6 to 7 ft. high, 1 in. diameter.	
American Linden—	
50, 8 to 10 ft. high, 1 1/4 in. diameter	
50, 6 to 7 ft. high, 1 in. diameter.	
Barberry Thunbergii—	Baby Rambler Rose—
2000, 18 to 24 in.	3-year.
5000, 12 to 18 in.	
Box Elder—	
1700, 8 to 10 ft. high, 1 1/4 in. diameter.	
1000, 6 to 7 ft. high, 1 in. diameter.	
Catalpa—	
500, 8 to 10 ft. high, 1 1/4 in. diameter.	
500, 6 to 7 ft. high, 1 in. diameter.	

Norway Maple—

200, 12 ft. high, 2 in. diameter.
2000, 10 ft. high, 1 1/2 in. diameter.
3000, 8 to 10 ft. high, 1 1/4 in. diameter.
5000, 6 to 7 ft. high, 1 in. diameter.

Russian Mulberry—

500, 8 to 10 ft. high, 1 1/4 in. diameter.
1000, 6 to 7 ft. high, 1 in. diameter.

Silver Maple—

500, 12 ft. high, 2 in. diameter.
5000, 10 ft. high, 1 1/2 in. diameter.
3000, 8 to 10 ft. high, 1 1/4 in. diameter.
5000, 6 to 7 ft. high, 1 in. diameter.

EVERGREENS (burlapped)

American Arborvitae—

100, 5 to 6 ft.	Koster's Blue Spruce—
300, 4 to 5 ft.	24 to 30 in.
300, 3 to 4 ft.	1000, 18 to 24 in.
1000, 2 to 3 ft.	1000, 12 to 15 in.

Norway Spruce—

100, 5 to 6 ft.
3000, 4 to 5 ft.
4000, 3 to 4 ft.
5000, 2 to 3 ft.
1000, 18 to 24 in.
5000, 12 to 18 in.

Colorado Blue Spruce—

50, 3 ft.	Pyramidal Arborvitae—
100, 2 ft.	1000, 2 to 3 ft.
1000, 1 ft.	1000, 18 to 24 in.
	1000, 12 to 18 in.

Hemlock Spruce—

100, 5 to 6 ft.	Rhododendrons.—
100, 4 to 5 ft.	Assorted.
100, 3 to 4 ft.	

APPLE—two year

	6-7 ft.	5-7 ft.	4-5 ft.	3-4 ft.
	1-in. 1 1/4-in.	1 1/2-in.	1 3/4-in.	2-in.
Akin	50	100	100	50
Arkansas Black	30	20	30	10
A. S. Russett	20	20	20	10
Baldwin	1200	2000	1000	1000

Ben Davis	2000	3000	3000	1000	1000
Bismarck	20	20	20	20	20
Carthouse	20	20	20	20	20
Coffelt Beauty	30	50	50	10	10
Cooper's E. Mkt.	30	30	30	20	20
Dominie	50	100	200	100	100
Ea. Harvest	2000	1000	1000	1000	1000
Early Melon	20	20	30	10	10
Ea. Strawberry	100	300	300	300	100
Fanny	20	20	50	30	30
Flora Belle	50	300	300	300	300
Gano	1100	1500	1500	1500	500
Golden Beauty	1500	500	500	500	500
Gravenstein	100	800	1000	800	800
Grimes' Golden	1500	1000			
Hyslop	1500	500	500	500	500
Ingram	20	50	50	20	20
Jeffers	50	50	50	20	20
Kinnards	100	100	100	100	100
King	50	100	100	100	100
Lankford	50	200	200	200	200
Late Raspberry	20	30	20	10	10
Lawver	50	100	100	50	20
Longfield	50	100	100	100	100
Mann	20	20	20	10	10
Martha Crab	20	30	30	10	10
M.B. Twig	1500	1100			
Missouri Pippin	50	200	200	200	200
Myrick	100	100	100	50	50
Nero	1500	3100	3100	1100	1100
Opalescent	50	200	200	200	200
Payne's L. Kp.	10	20	30	10	10
Pewaukee	100	100	100	50	20
Porter	30	50	50	10	10
Rawle's Jant	20	20	20	20	20
Red Astrachan	100	1000	1000	1000	1000
Red June	20	30	20	10	10
R.I. Greening	100	500	500	100	100
Rolfe	50	200	200	100	100
Roman Stem	200	200	200	200	200
Salome	20	20	20	10	10
Smith's Cider	30	50	50	10	10
Spitzenburg	300	500	500	500	200
Stark	1200	3400	3300	3200	100
Stayman's	1500				
Sweet Bough	50	50	50	50	50

Harrison's Nurseries
J.G. HARRISON & SONS PROPRIETORS
BERLIN MARYLAND

Designed and written by The McFarland Publicity Service, Harrisburg, Pa.



THE NATIONAL NURSERYMAN



FEBRUARY, 1911

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

The Monroe Nursery

Established 1847.

OFFER A GENERAL LINE OF

Choice Nursery Stock

PEACH, STD. PEAR,
PLUM, CHERRY, Etc.

I. E. Ilgenfritz' Sons Co.

MONROE, MICH.

Mount Arbor Nurseries

E. S. WELCH, Proprietor

Shenandoah, Iowa

Make a Specialty of a Full Line of
General Nursery Stock for the
Wholesale Trade

WE HAVE A SURPLUS OF

APPLE—Light Grades

CHERRY—sour and sweet varieties.

EUROPEAN PLUM

CURRENTS. CONCORD GRAPE

AMERICAN ELM SEEDLINGS

HYBRID PERPETUAL ROSES

CALIFORNIA PRIVET

Will be pleased to name prices on your wants.

SPRING TRADE LIST ready February 1st

EVERGREENS

OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI

by the thousand.

Andorra Nurseries,

WM. WARNER HARPER, Prop.

CHESTNUT HILL, PHILA., PA.

C R A B S

50,000 11/16 and up, 5 to 6 feet

45,000 9/16-11/16, 4 to 5 feet

20,000 3 to 4 feet branched

Alaska, Beeches' Sweet, Darth Early Strawberry, Excelsior,
Faribault, Florence, Hiller, Hyslop, Lyman's Pro. Minnesota,
Orange Pickers, Quaker B, Siberian, Sweet Russett, Sweet
Orange, Transcendent, Virginia, Whitney.

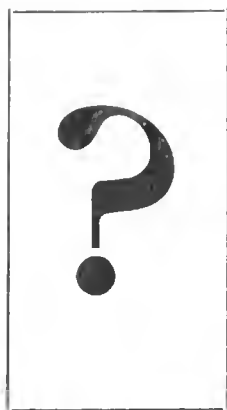
THE LARGEST STOCK OF CRABS IN
THE COUNTRY THIS SEASON

LET US PRICE YOUR LIST, WE ARE PUTTING THEM
DOWN CLOSE TO COST.

All extra smooth Stock—samples on request.

The Jewell Nursery Co.

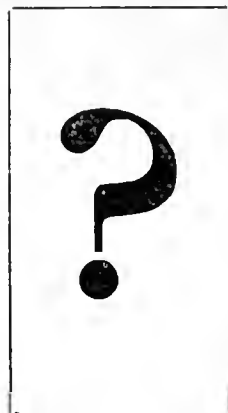
LAKE CITY, MINNESOTA



Have you received special corrected price list of

SCHAUM & VAN TOL

BOSKOOP, HOLLAND



quoting on full line of Holland-grown stock, such as

BOXWOOD, RHODODENDRONS, ROSES, TREE ROSES, HYDRANGEA P. G., MAGNOLIAS, PAEONIES, AZALEAS, CLEMATIS. KOSTER BLUE SPRUCE, EVERGREENS, Etc., Etc.

Schaum & Van Tol are headquarters for Boskoop grown Nursery Stock, carefully selected, well graded, excellently packed. Write for catalog and special price lists.

FOR SPRING AND FALL SHIPMENT

OUDENBOSCH NURSERY STOCK. Norway and Schwedler Maples, Tilias, Chestnuts, Thorns, Elms, Evergreens, Etc., from Union Nurseries, Oudenbosch, Holland.

FRENCH ORNAMENTALS. (1000 varieties). Evergreens, (200 varieties) all suitable for lining out.

JAPANESE NURSERY STOCK. Sciadopitys, Jap. Maples, Tree Paeonies, Iris, Thuya, Hardy Lilies, etc.

BAY TREES. Pyramids, Columns, Standards, high and short stems and all other shapes from Belgium.

HERBACEOUS AND PERENNIAL STOCK. From Royal Tottenham Nurseries, Deedemsvaart, Holland.

RAFFIA. RED STAR BRAND and three other grades from stock at New York. (Bale lots only).

ENGLISH Gooseberries, Whinham Industry, etc. Trained Fruit Trees, etc.

SHIPPING. We have our own Custom House Department. Shipping connections at Havre, Antwerp, Rotterdam, Southampton, Hamburg, etc. Lowest rates consistent with perishable nature of stock.

McHUTCHISON & CO., 17 Murray St., New York City

The Farmers Nursery Company

TROY,

OHIO

OFFER

APPLE, assorted, heavy in light grades

PEAR, Standard, assorted, extra fine lot of Kieffer

CHERRY, 2 year, the finest stock we have ever grown

PLUM, Japan and English, good assortment of varieties

PEACH, choice stock in all grades

EVERGREENS

ARBOR VITAE, 2 to 8 ft.

NORWAY SPRUCE, 2 to 8 ft.

ARBOR VITAE, 2 to 4 ft.

BALSAM FIR, 2 to 5 ft.

These evergreens have been transplanted, and are fine specimen plants. Can supply in carload lots

Silver Maple, Am. Elm, C. L. W. Birch, all sizes
Catalpa Bungeii, 3 year heads

Catalpa Spec. Seedlings, all grades. Golden Willow 2 year plants

Stock grown at Dansville, N. Y. and Troy, O.

FOREST TREES FRUIT STOCKS

and BRIARS. Millions in Stock

Seedlings and transplanted. All healthy, stout and well rooted stuff, very cheap. . .

Best shipping facilities via Hamburg at special freight rates.

Catalogues and Forest Planter's Guide free on application.

J. HEINS' SONS

By special appointment to the Court

Imperial and Royal

Largest Nursery in the World

Shipments of over 160 millions of Plants annually

**HALSTENBEK, No. 152,
Near Hamburg, Germany**

NURSERYMEN AND FLORISTS

looking for stock can find largest assortment in the
United States at the

Painesville Nurseries

Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
Plants, Grapes, Gooseberries, Small Fruits, Bulbs, Seeds, Palms
and other tender Greenhouse Plants

Have a large stock stored in frost proof cellars that can be shipped at any time desired;
switch from N. Y. C. lines direct into our packing house; can load without exposure.
Unsurpassed facilities for handling orders large or small. Catalogs and price lists free.

A few specials while they last:

STANDARD PEARS in assortment DUCHESSE DWARF PEARS BOURGEAT QUINCE
PRUNUS PISSARDI and TRILOBA CUTHBERT AND OTHER RASPBERRIES
CONCORD AND OTHER GRAPES

OUR SPECIALTIES ARE

ROSES

H. P.

Moss

Ramblers

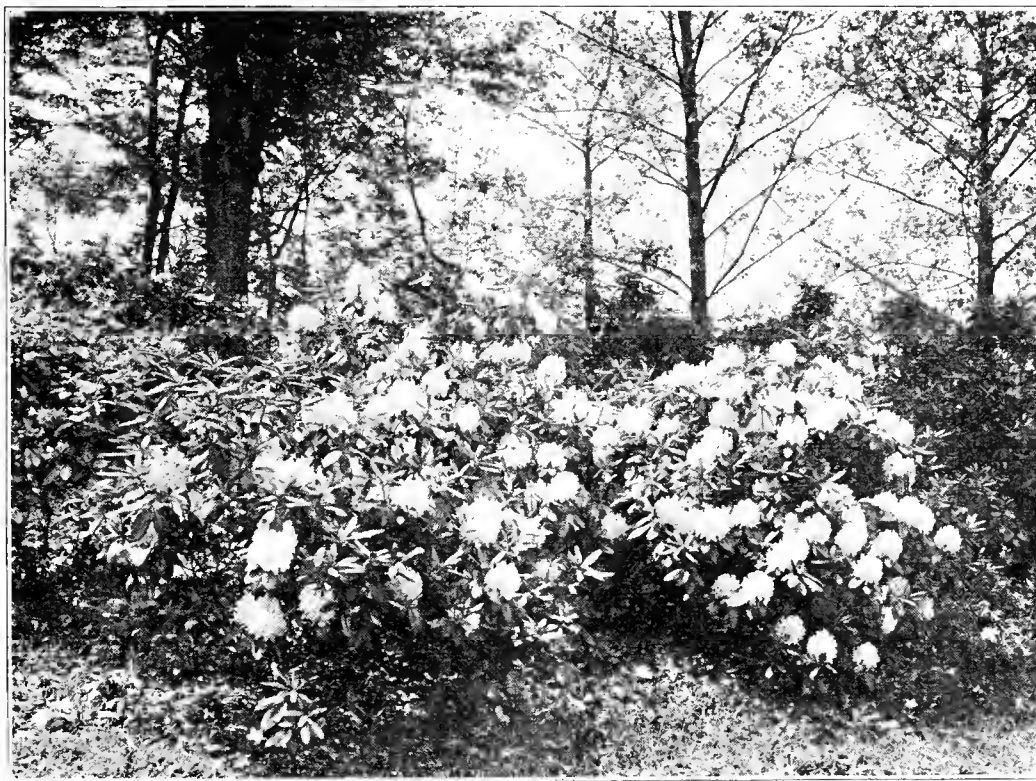
Climbers, Etc.

PEACHES

PEARS

PLUMS

CHERRIES



RHODODENDRON.

Ornamental

Trees and

Shrubs in

Car Lots

Weeping Mulberries
Elm and Ash

Clematis

Ampelopsis

Paeonies

Hydrangeas, Bush
and Tree

Perennial Plants

NO TROUBLE TO PRICE YOUR LIST OF WANTS.

55 Years

1200 Acres

44 Greenhouses

THE STORRS & HARRISON CO.

PAINESVILLE, OHIO

A BLUE ROSE

The Greatest Rose Novelty of the Century

It flowered with us this season and
was greatly admired

The New Rambler (Violet Blue), hailed
by the German rose growers as the fore-
runner of a genuinely cornflower blue rose,
is a seedling of Crimson Rambler, very
vigorous and hardy, and full blooming.

SEND FOR DESCRIPTION AND PRICE

Ellwanger & Barry

MOUNT HOPE NURSERIES
ROCHESTER, N. Y.

Jackson & Perkins Company

offer to the trade an unusually complete
assortment of Fruit and Ornamental
Stock, including some things scarce and
hard-to-find; their Tree Hydrangeas,
Tree Lilacs, Roses, Clematis, Ampelopsis
Veitchii, Dwarf Apples, Cherries on
Mazzard, and a few other Specialties,
have earned for the J & P goods the
name of

"PREFERRED STOCK"

A few more buyers can be taken care
of very well. Want Lists are invited.
January Bulletin will be sent on request.
The address is

Jackson & Perkins Company

Dispensers of The Preferred Stock, grown at
NEWARK, which is in WAYNE COUNTY,
near Rochester, New York

SPECIAL NOTICE

APPLE QUINCE PEAR CHERRY
PEACH PLUM

A Fine Block of
Own Root Roses

ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
EVERGREENS PEONIES PHLOX
PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

Write for our Special Prices

Special Attention given to Dealers, complete lists
and carload lots.

W. & T. SMITH COMPANY

GENEVA, N. Y.

63 Years

700 Acres

Azalea Indica
(Home-Grown)

Berberis Japonica

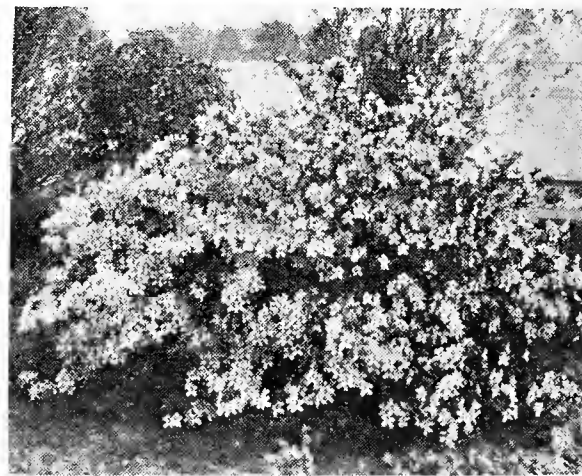
Magnolia Grandi-
flora

Yucca Treculeana

Biota Aurea Nana

Field-Grown
Roses

Write for Prices
and Information



Get Some of This Stock For Your 1911 Trade NOW

We have a considerable stock of the trees and shrubs
mentioned above, and offer them to the 1911 trade at reason-
able prices. This is all clean, first-class stock, and will be sure
to please your trade in every way.

Our location offers a distinct advantage, in that we can
grow stock here which succeeds admirably both north and south
of us. The above varieties are such as will transplant readily
and thrive for your customers, almost regardless of location,
after the splendid start which they get in this warm and
genial climate. We have thousands of satisfied customers in
nearly all parts of the country.

We grow a full stock of Ornamentals, Fruits and Nuts, and
invite inquiries from the trade relative to particulars on any-
thing in which they are interested.

P. J. Berckmans Co., Inc., Fruitland Nurseries
Augusta, Georgia

Established 1856

Over 450 Acres in Nurseries

The Best Tree Digger on Earth



Used and Recommended by Leading
Nurserymen.

The one we have used for years and by far the most satisfactory of any we have ever seen. It does exactly the work for which it was designed and does it right. If interested we will be glad to send description and prices.

Stark Bros. Nursery & Orchards Co.

LOUISIANA, MO.

R. DOUGLAS' SONS

WAUKEGAN NURSERIES

WAUKEGAN, ILLINOIS

Evergreen Seedlings

IN LARGE QUANTITIES

EVERGREENS FOREST TREES

A Full line of Ornamental Trees
and Shrubs

ESTABLISHED 1848

We offer for

Fall and Spring, 1910-11

A LARGE STOCK OF

Hamamelis Virginica	Hornbeam
Silver Poplar	Black Locust
Tulip Poplars	American Persimmon
Carolina Poplars	Box Elder
Sweet Gum	Viburnum Prunifolium
Ozier Dogwood	Japan Walnuts
Catalpas	Balm of Gilead
Black and White Walnuts	Laurus Benzoin

(SHRUBS)

500 M California Privet	Weigelas
Calycanthus	Kudzu Vine
Deutzias	Ampelopsis Quinquefolia
Spireas	Honeysuckle Upright White
Wistaria, all kinds.	

We offer a good assortment of Shrubs and a nice
Collection of Ornamentals

We have several million Hardwood Cuttings,
California Privet, Spireas, Etc.

Send for Trade Price List. Address

Forest Nursery & Seed Co.

McMinnville, Tenn.

Franklin Davis Nursery Co.

BALTIMORE, MD.

We offer for FALL 1910 and SPRING 1911

APPLE 1 and 2 year; heavy on York Imperial, Stayman's Winesap, Blacktwig, Grimes Golden, and other standard varieties.

PEAR, STANDARD, Kieffer, 2 and 3 year, and other leading kinds.

PEACH; Expect our Peach to be fine; we have a heavy stock and will book orders for several carloads now. Peach are bound to advance. We are heavy on Elberta, Carmen Crawford's Late, Old Mixon Free, Stump, Beer's Smock, etc., etc.

ASPARAGUS, 1 and 2 year; Palmetto, Barr's, Conover's Giant.

CHERRY, 2 yr. leading varieties.

PRIVET, 1 and 2 year, a fine lot of heavy No. 1 plants.

POPLARS, a fine lot of Carolina and Lombardy in all sizes, by the carload.

PLANES, a fine lot of Oriental Planes in all sizes.

CATALPA SPECIOSA, several thousand at a low price.

ELMS, AMERICAN; Several hundred nice trees.

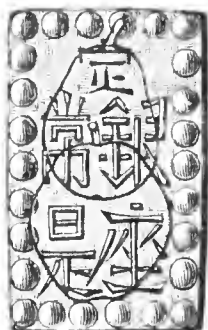
WALNUTS, JAPAN, in all sizes.

Extra large bushy SHRUBS, such as Altheas, Weigelas, Spireas, Deutzias, Snowballs, Judas, Hydrangea, P. G.

Extra large SUGAR MAPLES several hundred 3 to 3 1-2 and 4 to 4 1-2 inches, fine trees, with good heads and straight bodies.

We also have a general line of other stock. Send us your want list.

Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries

Huntsville, Ala.

JESSIE S. MOSS, Prop.

We offer for Fall of 1910 and Spring of 1911 in large quantities as usual:

SPECIALTIES

APPLES—Commercial varieties, one year, in large supply. As fine in quality as ever grown.

PEARS—Kieffers, one and two years old. A much smaller crop than heretofore.

CHERRIES—On Mazzard. One year. Bing, Lambert, Napoleon, Black Tartarian.

CHERRIES—On Mahaleb. One and two years. Ea. Richmond, Dyehouse, Montmoreney, Wragg, Royal Duke, in small supply.

PEACHES—We excel in Peaches, and of these we will have as fine a stock as we have ever grown, both in one year and June Buds.

ROSES—Budded. We will have a large and fine stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.

PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.

MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

See Price List for particulars.

Address, W. F. HEIKES, Manager,
HUNTSVILLE, ALA.

Have you seen and examined the quality and finish of our

Rawhide Brand of Shipping Tags and Tree Labels

printed or plain, strung or wired?



This stock is especially adapted to the most severe usage, being thoroughly waterproof & weather-proof. "Once used, always used."

Send for samples and prices. Our reference are the largest nursery men in the United States.

The Denney Tag Co.

WEST CHESTER, PENNSYLVANIA

Our Catalogue for Spring 1911 Now Ready

This list offers an exceptionally fine lot of Hardy Ornamental Trees, Shrubs, Vines and Evergreens. We have a large assortment of sizes and varieties. Many being of the rare varieties, especially in Evergreens. If you have not received a copy of this list send for it at once. It will interest you, and it is free for the asking.

Our Nurseries comprise 225 acres, all devoted to the growing of Hardy Ornamental Nursery Stock. All stock is properly grown. Each plant is given plenty of room for development, well cultivated to encourage a healthy growth and is frequently transplanted to make fibrous roots. In digging we are particular to get all the roots.—We do not chop them off. It pays to plant such stock; it will grow and give best results.

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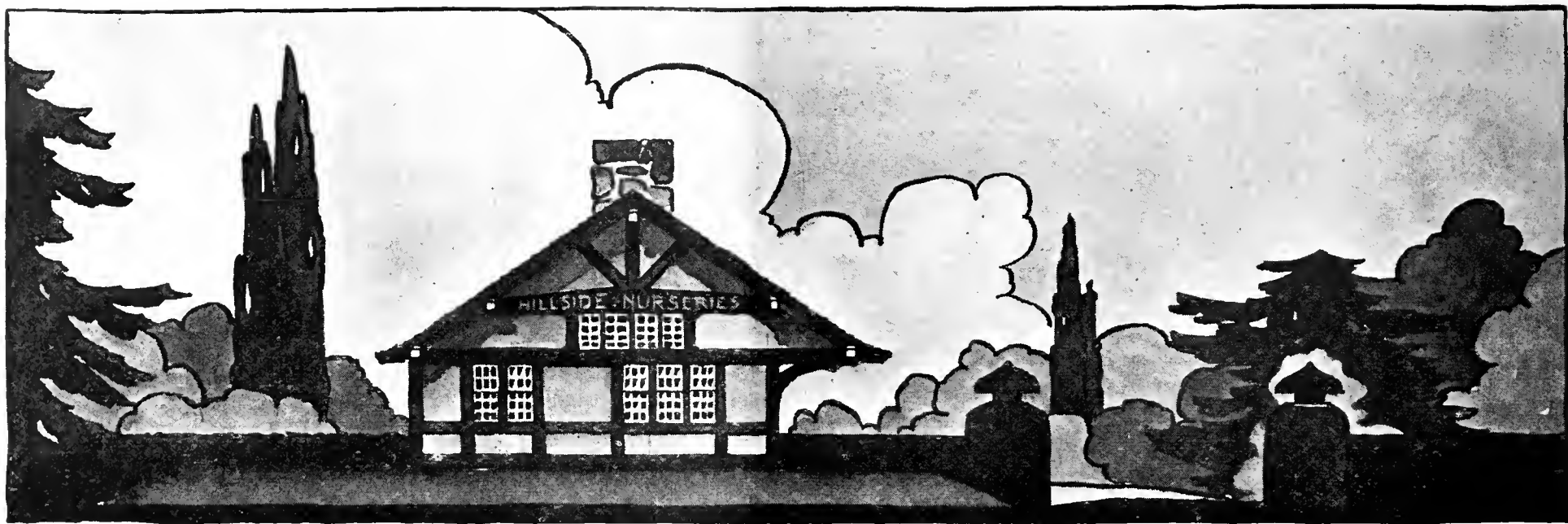
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FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XIX.

ROCHESTER, N. Y., FEBRUARY, 1911

No. 2

A NURSERY OFFICE

Importance of Cultivating Attractive Business Headquarters

WILLIAM DRAPER BRINCKLE, Architect

Why should it be that nurserymen so very generally neglect the advertising value of a crisp, picturesque little office? The merchant, the banker, the real-estate man, they spend a good slice of prospective profits on the mere, sheer looks of the buildings, even the railroads build beautiful little country cross-road stations, when cheap, ugly ones would shelter the passengers quite as well. None of these hard-headed business folk spend money for fun, but — "Beauty Pays!" say they!

So with the nursery. Very beautiful the grounds may be, very magnificent the stock, then why should several utterly bare, commonplace board shacks be scattered about, like so many blotches on the landscape? Any traveling salesman knows the value of first impressions—he dresses as neatly as may be and sends in a beautifully printed card. But, when he has persuaded Mrs. Colonel Van Dollarbilt to "Inspect personally our unrivalled collection of dwarf conifers," what sort of impression does that lady receive? "Oh, yes they had

a fair assortment of evergreens, but that utterly impossible little office, painted such a hideous gray! Why, my dear, I would no more think of letting those people lay out my new Italian garden!—"

So here's a suggestion for a small building, suited to the needs of the average nursery. The construction is of the simplest, indeed, it shouldn't cost any more than the most ordinary affair of boards and siding.

A rather prominent site should be picked out, in full view of the road, that passing automobiles may see. Then, if there is no natural terrace, an artificial one should be raised, two or three feet; on this, a thin slab of reinforced concrete is laid, covering the entire floor-area. This is cheaper and better than the usual foundations. On this concrete, a wood floor is laid, nailed to thin sleepers.

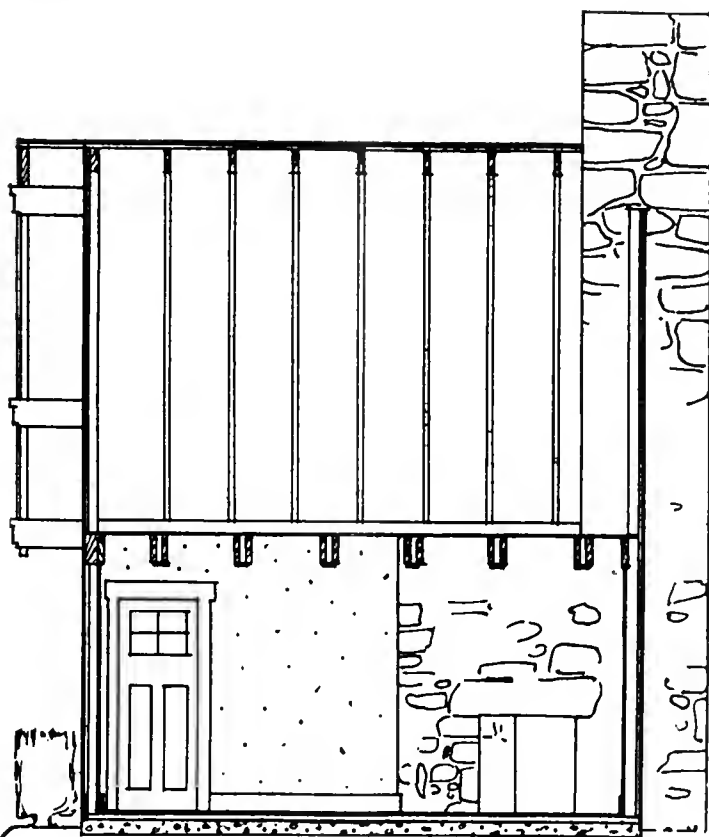
The walls are all framed up of ordinary 2x4 studding, sheathed and covered with heavy building-paper. On the outside, everything is covered with cement plaster, rough-cast on metal lath, paneled off with imitation timber-work of inch stuff, stained some dark blackish-green tone. This plaster should be tinted ever so little, just

a cream-color is best, and extremely harmonious it is, too, against a background of evergreens.

Some builders are prejudiced against outside plaster work, but when properly done, it is absolutely permanent. The cost is a very little more than ordinary frame siding, but in five years' time the saving in paint bills will wipe out this difference.

The roof should be shingled; natural gray or dark green is best, here.

Inside the building, comes a fair-sized main office, with a smaller private one. The walls are in buff sand finish, but the ceiling is of wood, with the heavy beams exposed. All wood work and finish should be of the simplest



Section, Scale, 1/8 inch to 1 foot.

mission type, stained a dark brown.

A huge fireplace of stone or rough brick is very desirable, though not absolutely necessary. Stoves, electric heaters, or "gas-steam" radiators may be used for winter, unless, indeed, a pipe may be laid across from some green-house boiler.

Two toilet-rooms should be arranged, with outside doors; frost-proof closets may be set here.

The loft is chiefly meant to serve as an air-space to shield the first story in hot weather, but it may also serve for storage of tools and supplies. A steep stairway leads up, and there are two second story doorways in the rear gable, to take in bulky things.

The surroundings should be carefully studied. A red-brick pavement is laid beneath the shelter of the overhang,

with brick steps leading up the slope of the terrace. Some good topiary-work, in privet, tree-box, or yew, might be worked into approaches, while behind the building, a background of mixed evergreens should be judiciously placed.

A certain land-company for whom the writer designed much this sort of an office outlined their name in small electric lamps on one of the beams; at night, this formed an exceedingly effective sign.

Should the office shown here be too small, it can, of course, be readily widened without any sacrifice of beauty.

What will this cost?

Indeed, that's an extremely difficult question. In some localities, mechanics get \$1 per hour, in other places,

equally good men get only 17 1/2 cents for the same length of time. Lumber, sand and stone cost all sorts of prices, and so it's perfectly possible that you, Messrs. A, B, and C, may build this office for \$300 or even less, while you, Messrs. X, Y, and Z, may find the contractor demands \$1200 or more! Probably an average of \$600 would be fairly correct, in the neighborhood of the large eastern cities. However, the drawings shown here are all made to scale; even the half-tone drawing is laid out accurately at 16 feet to the inch. Why not, then, show this page to some local builder? He can give a very close preliminary estimate; much closer, at all events, than any more "average" estimate, good for the whole United States!

COMPARISON OF BOX AND BARREL

S. W. FLETCHER, Director Virginia Agricultural Experiment Station

1. QUANTITY OF FRUIT—It is probably true that the box is a more convenient quantity of fruit for the "ultimate consumer," who has recently received so much attention by tariff makers, than the barrel. Over 30 per cent. of our population now live in cities, and the percentage of city dwellers is increasing with each census. A majority of the city and town people, constituting the main market for fruits, have no cool cellar in which fruit can be stored. Their storage facilities are limited to the refrigerator. They wish to buy only such a quantity of fruit as will keep, at the ordinary temperature of the house, while it is being used. Under such conditions the box is a more convenient package than the barrel. A large basket of the Climax type, holding about a peck, would be more convenient still, especially for summer and autumn apples.

On the other hand, there is a large demand for apples in bigger bulk,—not only because of the custom of years, but also for the winter supply of those who have a cool cellar, and for export. Certain varieties carry better across the water in barrels, than in boxes, because the latter packages permit the entrance of salt air.

2. COST OF PACKAGE—On the Pacific Coast, apple boxes cost from six cents to nine cents, knocked down. As three boxes can be packed out of one barrel, at that price the boxes are cheaper than the barrel. In the East we pay from eleven cents to twenty-one cents per box. In Virginia, boxes cost ten cents to twelve cents; in Minneapolis, Minn., fourteen cents; while Mr. Robert Brodie of Montreal states that his boxes cost twenty-one cents. The price of barrels in the East, this fall, ranges from thirty cents to forty-five cents, with an average of about thirty-five cents. Bought knocked down in car load lots, they have cost certain growers twenty-eight cents to twenty-nine cents. The inferior quality of some eastern-made boxes, as noted previously, should also be considered. The comparative cost of barrels and boxes is a local problem, and each grower will have to get estimates.

3. GRADING AND PACKING—The fundamental differ-

ence between the two types of packages is here: The box encourages, and almost enforces, honest and uniform grading, while the barrel permits carelessness in this respect. The cost of packing is also an item. Where a very large quantity of fruit is packed by specially trained men, it costs little if any more for labor to pack in boxes than in barrels. But the small grower, and especially one who has been accustomed to the barrel pack, will find that it costs from one-third to one-half more to pack in boxes than in barrels. It should be noted, also, that very small, or otherwise inferior fruit seldom if ever yields as high returns in the box pack as in the barrel pack. Only the large sizes go well in boxes. It is a question for each grower to decide, whether he can get more by sorting out his fancy and No. 1 stock for boxing, and selling the smaller fruit in barrels, than to sell all in barrels as No. 1's.

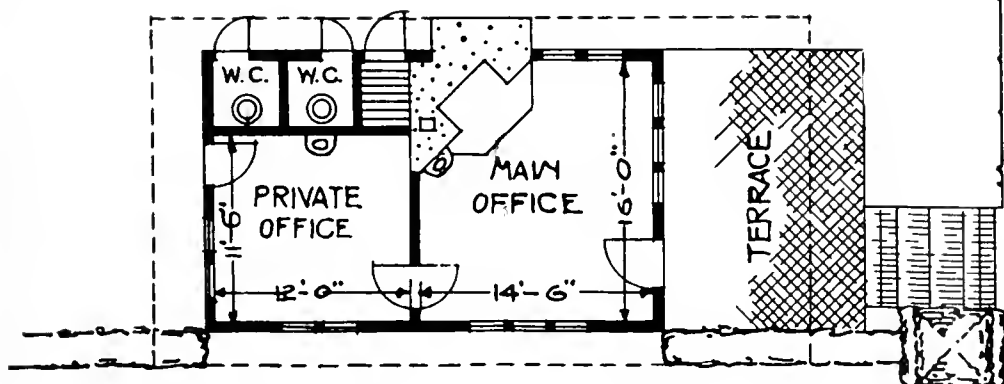
Another point to be considered is the shape of the fruit. It is almost imperative that box fruit should be quite regular in shape. Lop-sided and mis-shapen fruit, like the York, especially from young trees, would not pack well in boxes.

The most important point under this heading, however, is that no one has ever succeeded with the box pack using common stock. Only fancy and No. 1 fruit of the best quality has paid in boxes. By intensive methods, and especially by thinning the young fruit on the trees, many of the best western growers have been able to produce fruit, ninety-five per cent. of which is fancy. Practically all of the Hood River fruit is box fruit. I doubt if, on an average thirty per cent. of the apple crop of Virginia, or Ontario, or any other part of the East, is box or fancy fruit. This point must be kept emphatically in mind when the suggestion is made that the box should become the exclusive apple package of the East, as it is now in the West.

4. QUALITY OF FRUIT—Of far less importance than the grade of the fruit in the package, in respect to the question before us, is its quality. It is a fact, however, that the box fruit that has commanded the highest prices is mostly of

varieties of high quality,—Winesap, Spitzenburg, Newtown. But other varieties, even some of very indifferent quality, have been sold in the box package to great advantage, showing that the style of package and the grade of fruit, rather than its flavor, are the deciding factors. However, the

trained men, not for the average farm help. In this respect it differs materially from barrel packing, which may be quite well done by ordinary help. Moreover, the habits of several generations of men who have packed in barrels, using "facers" and "fillers," have descended to the fruit growers of today; and many of them find it extremely difficult to keep the smaller, poorly colored, or slightly imperfect specimens from gravitating to the bottom of the box. It will take a generation or two, perhaps, to breed out that habit. The western man deserves no credit for being more honest in this respect, for, as has been pointed out, honesty was not merely the best policy for him, but the only policy that would pay freight rates.



Floor Plan of Nursery Office. Scale, 1-16 inch to 1 foot.

general experience has been that the better the quality of the fruit, the more apt it is to pay in the box pack. If varieties of inferior quality pay in the box pack, it is because the style of package and the grading outweigh the deficiency in quality.

EXPERIENCE WITH THE BOX PACKAGE IN THE EAST

Having in mind the essential difference between the box and the barrel trade, it does not seem strange that most of the attempts to use the box in the East have not resulted satisfactorily. It is probably near the truth to say that eight out of every ten trials of the apple box in the East have been unsuccessful. A notable example is an experiment by the Field Pomologist of the U. S. Department of Agriculture, Mr. W. A. Taylor, several years ago. He sent abroad during two seasons eight carloads of carefully graded box Baldwin, York, and Newtown, but with indifferent results as compared with barrels. There are many possible reasons for these failures.

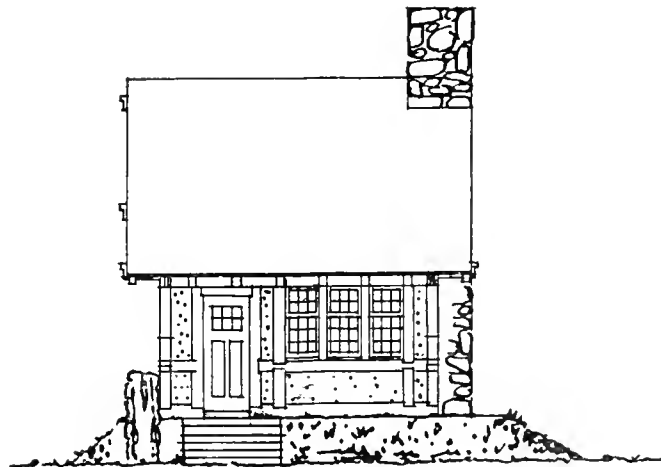
1. **CUSTOM**—Custom is hard to change,—and the box package is an innovation in the East. As a rule, eastern buyers and grocers do not look with favor upon the box, partly because the profits in repacking and selling a barrel of indifferently packed apples are apt to be greater than in handling three well packed boxes. If the producer could deal with the consumer, it would be different; there is no doubt but that a majority of the consumers would prefer the box, or a smaller package, if the fruit did not cost much more.

2. **THE MARKET**—A good deal depends upon what a certain market prefers, in the matter of fruit packages, as well as in fruit varieties. West of the Mississippi there is special necessity for caution in this respect. Some buyers want their fruit in boxes, and others prefer barrels, according to the market they expect to reach. The grower who ships should be equally wise.

3. **POOR PACKING AND GRADING**—More failures arise from this cause than from any other. The art of packing boxes is not acquired in an hour. It is work for specially

The drift is all towards the smaller package. This is in keeping with the trend of the times with respect to other commodities. There is no doubt but that the box package, or at least the smaller type of package, will some time entirely supplant the barrel. The smaller package will not necessarily be made of wood. We can expect the wooden package to be replaced, eventually, by paper, cellulose, or some other cheap material. Even now some very substantial paper boxes are on the market. When speaking of the box type of package, therefore, we refer to the size and shape of package, rather than to the material.

[But while the box type of package is the ideal towards which we are rapidly working, it by no means follows that every eastern fruit grower should begin packing in boxes at once. He should begin only when he is ready; and nine-tenths of the growers are not ready. To be ready for box packing means that the grower can get good boxes about as cheap as barrels, bushel for bushel; that he is able to grow a crop of fruit, preferably of high quality varieties, at least ninety per cent. of which is fancy or No. 1; that he is able to command skillful and experienced packers; that he is able to put a large quantity of box fruit on the market, not one year only, but year after year, so as to win a reputation for



Front Elevation of Nursery Office. Scale, 1-16 inch to 1 foot.

the brand; and that he ships his fruit to markets that are already familiar with the box pack and take kindly to it. At the present time not one apple grower out of ten, east of the Mississippi, is able to meet these conditions.

With respect to the market, the fruit grower must recog-

nize the different demands of two entirely different types of markets. One of these, the common or general market, will pay a fair price for good or common stock. The other, the special or fancy market, will pay a fancy price for fancy stock. At the present time the box package supplies the special or fancy market almost exclusively, while the barrel package supplies both, but more especially the common or general market. These two classes of markets will always exist, or as long as some people are more successful in accumulating money than others. It goes without saying that the demand for cheap or common fruit, at a fair price, will continue to be very much greater than the demand for fancy fruit at a high price; because there are many more people who are in moderate circumstances than there are people who are able to pay fancy prices for fruit. The proportion of fruit growers who are able to grow fancy fruit is as small as the proportion of consumers who are able to pay fancy prices. Location, soil, and the varieties best adapted thereto may make it more profitable to grow staple varieties for the common market. This cheap fruit—the main supply of the great middle class of people—will be marketed in barrels to best advantage for many years to come.

The successful marketing of apples in boxes depends so much upon skillful grading and packing and upon the possession of a large quantity of fruit so packed, that it seems likely that very little impetus will be given to box packing in the East except through co-operative shipping associations. Here and there an exceptional grower may find it profitable to pack his fancy grade of certain varieties in boxes; but it does not seem probable that box packing will make much headway in the East except through the co-operative shipping association, with its trained business manager and its crews of trained packers.

These conclusions indicate that the eastern fruit grower should be a conservative on the subject of the box apple package. The drift is towards the smaller package—but, at the present time and for many years to come, apple growers who are so situated that they must produce apples for the general or common markets—which means a majority of the growers—will find the barrel more profitable. With the advent of co-operative shipping associations, the box package will become more and more common in the East, and eventually even for the common grades of fruit.

Fruit and Plant Notes

DWARF APPLES

There has been a considerable amount of discussion during the past five years on the question of whether the dwarf apple was a desirable form of the apple tree to plant in orchard, either as filler or as a permanent tree. The experiments of the New York State Station at Geneva tend to demonstrate that there is little advantage in using either the Paradise or the Doucin stocks. The former is supposed to produce the smaller tree, but as a matter of fact, there is so much confusion among nurserymen as to the identity of

these two types, that there is little certainty as to which the purchaser may secure. The experiments of the Geneva Station have shown that the trees on Paradise stock have borne somewhat earlier than standard trees of the same varieties, but the yield has been so small thus far that the advantage gained is inappreciable. The claim of greater size, better color, and higher quality of fruit produced by dwarfs over fruit from standards has not been substantiated by the results of the New York Experiment Station. Then, again, the greater care in culture demanded by the dwarf tree would appear to offset the temporary advantage of earlier bearing. The conclusion of the study up to the present time is that while the dwarf tree may be of special service to the amateur, it has little value or advantage for the grower of commercial orchards.

VARIETIES OF APPLES FOR THE NORTHWEST PACIFIC

The following varieties of apples have been recommended by W. S. Thornber, horticulturist of the State College of Agriculture of Washington:

COASTAL SLOPES	INLAND VALLEYS	UPLAND VALLEYS
<i>Late</i>	<i>Late</i>	<i>Late</i>
Northern Spy	Spitzenburg	Rome Beauty
Olympia	Yellow Newtown	Wagener
Rhode Island Greening	Rome Beauty	Jonathan
Yellow Newtown	Winesap	Gano
Blue Pearmain	Grimes' Golden	White Winter Pearmain
Yellow Bellflower	Jonathan	York Imperial
Glowing Cool	White Winter Pearmain	Delicious
Grimes' Golden	Delicious	
Ortley		
<i>Medium</i>	<i>Medium</i>	<i>Medium</i>
Gravenstein	Gravenstein	King
King	Duchess	Gravenstein
Duchess	King	Duchess
	Winter Banana	Winter Banana
<i>Early</i>	<i>Early</i>	<i>Early</i>
Yellow Transparent	Williams	Yellow Transparent
Williams	Yellow Transparent	Williams

EXPERIENCE IN RENOVATING ORCHARDS

Mr. Thomas S. Smith, of 105 South Water Street, Chicago, four years ago bought a neglected orchard in New York State, paying \$16,000 for it. The crop which was on it when he bought the place was, of course, a "neglected" crop, and consequently amounted to very little. This, with the two following crops, not only paid for the entire place, but put two thousand dollars of improvements into the place, and paid Mr. Smith a commission for selling his own apples. I have this statement direct from Mr. Smith himself, and I may add that it would be hard to find a business man in Chicago who stands higher than Mr. Smith. His word is absolutely good with everybody who knows him.—

FORREST CRISSEY.

These instances may be multiplied indefinitely. We know a twenty-acre peach orchard which paid last season twenty-six per cent. on a capitalization of \$1,000 per acre.—EDITOR.

Our Book Table

THE CARE OF TREES, by Bernard E. Fernow, Dean of the Faculty of Forestry, University of Toronto, late Director of New York State College of Forestry, Cornell University. 8x5½ in., 392 pages. Illustrated. Publishers, Henry Holt & Co. Price \$2.00.

In no division of the field of arboriculture has greater advance been made than in the line which makes for the maintenance of trees in healthy, growing condition. Tree surgery, as distinct from tree quackery and much foolishness which unfortunately prevails at the present time, having had its foundations laid many years ago, is a subject which has, under the direction of plant pathologists and skilled horticulturists, developed to a very important extent and degree in the last few years. There have been each year important contributions to our knowledge of rational methods of treating diseased and caring for healthy trees. An excellent addition to this store of knowledge comes to our desk under the above title. The volume is the work of a man who has devoted his entire life to forestry in its larger economic as well as in its practical aspects. We should expect, then, to have this subject, the care of the trees, treated by such a man in a rational and at the same time scientific manner. We are not disappointed.

The book is divided into nine chapters, aside from the bibliography of allied subject matter and the index. Prominent among the subjects which are considered is the physiology and morphology or structure of the tree. This naturally leads up to a consideration of the cause of the death of trees, which includes such destructive agents as insects, fungi, physical agents, as electric currents and mechanical injuries. Naturally this is followed by a study of the means of controlling them. This entire part of the book is strictly up to date, and contains the type of information which the plantman of today is in need of. The latter part of the book comprises a condensed discussion of plant material, with special reference to the adaptation of this material to soil and climatic environment. We have great pleasure in recommending this work to the attention of the readers of *THE NATIONAL NURSERYMAN*, and it may be obtained through this office at price quoted above.

SOME SUGGESTIONS FOR RHODE ISLAND APPLE GROWERS, by A. E. Stone. Abstract from Report of State Board of Agriculture for 1909. Published by E. L. Freeman Co., State Printers, Providence, R. I., 1910.

Dealing in a general way with many phases of apple growing, this book is intended especially to aid the beginner in this field. The author believes that the book, of which the following is a brief summary, will answer many of the questions which arise in the mind of the wide-awake young orchardist of Rhode Island.

During the last decade, fear of the San José scale has checked the planting of apple orchards in Rhode Island, reducing interest in the industry to a lower ebb even than it had been for some years previous; but now that San José scale is being conquered to a greater extent, orchardists throughout New England are venturing once more to plant on a commercial scale. Rhode Island does not now produce much more than half the quantity of apples she consumes, so it appears that there is a large field right at home for apple growers who will take advantage of favorable soil conditions in the northern and western parts of the State. The best apple orchards in Rhode Island are found on the Gloucester Stony Loam.

The common practice today for obtaining returns from the land before the orchard of standard trees will come into bearing is to interplant with early-bearing varieties of apples, rather than with peaches, small fruits, or vegetables. Wealthy and Oldenburg are recommended, the former being especially valuable, and next in order perhaps are Wagener and Yellow Transparent.

As to the respective values of the mulch and clean culture systems, the following results of a carefully conducted experiment show the advantage in this case to have been decidedly with the cultivated plots:

	<i>Mulched</i>	<i>Cultivated</i>
434 Fruits per barrel		309
2.8 Barrels per tree		4.2
\$71.52 Net profit per acre		\$110.43
1.1 Gain in tree diameter		2.1

But, on the other hand, many splendid orchards have been developed under the mulching system.

As to the purposes of pruning, they may be considered as four-fold, "to shape the tree, prevent an excess of wood growth and too great competition between the branches of the tree, open it up to air and sunlight, and to encourage the formation of fruit buds." The quantity and nature of the fertilizer required by apple trees depend on their stage of development. Young trees require nitrogen to promote a vigorous wood and leaf growth, while bearing trees need potassium and phosphorus.

Probably the chief obstacle which makes the would-be orchardist pause is the great number of enemies of the fruit. Among the most important insects are borers, scale insects, bud moth, tent caterpillar, canker worm, and codling moth, and common apple diseases are scab, canker, leaf spots, and blight. Kerosene emulsion is the most effective contact insecticide, and as to fungicides, both sulphur and copper sprays have enthusiastic advocates. The author then gives directions for the renewal of neglected orchards, and mentions several things which may be causes of the failure of orchards to bear well, and closes with some suggestions as to harvesting and marketing, in which the grower from any section may learn from the experience of orchardists all over the country.

FRUITS AND NUTS IN OUR FOREIGN COMMERCE

Of 458 million dollars worth of fruits and nuts which have passed through the United States ports during the past ten years, but 156 million dollars worth represent exports to foreign countries. There were receipts from territories of the United States to the value of 12 million dollars, and shipments to the same places of 5 million dollars; and all the rest, 285 millions, represents the value of foreign grown fruit and nuts imported. During the year ending June 30, 1910, fruits and nuts imported were valued at 19 millions, those exported at 36 millions.

Domestic production of raisins, prunes and oranges, is rapidly coming nearer to the amount required for home consumption. The imports of bananas, figs, walnuts, cocoanuts, and almonds continue to increase in value, as the home supply is far from being sufficient. Imports of fruits and nuts as a whole have increased from 21 million dollars in 1890 to 36 millions in 1910, but while in 1890 oranges were imported to a total value of 2 million dollars, less than 100 thousand dollars worth were brought into this country in 1910. Imports of raisins and prunes have fallen off to approximately the same extent. The figures for lemons run nearly the same for the different years, but bananas were imported in 1910 to nearly three times the value of those of 1890. Almonds, cocoanuts, and walnuts all show larger imports in 1910 than previously.

EXPORTS

On the export side, values have increased enormously; for exports of fruits and nuts have grown from four millions in 1890 to 19 millions in 1910. Apples, prunes, oranges, raisins, apricots, canned fruits, and nuts have contributed most largely to this. The exports of apples, including dried apples, have increased in twenty years from two to over five million dollars. The value of oranges, dried apricots, prunes, and canned fruits exported in 1910 was from about three to eight times greater than in 1890. The export of nuts in 1890 was valued at \$28,000, and in 1910, 400 thousand. The chief factor in the increase was peanuts.

Bananas supply about one-third of the foreign fruits consumed in this country, and come from Costa Rica, Honduras, Panama, British West Indies, and Cuba. Italy supplies practically all the lemons. The Zante variety of currants produced in Greece supplies practically all of the imports of that fruit.

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Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.

Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans. secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

AMERICAN POMOLOGICAL SOCIETY CATALOGUE REVISION

The fruit catalogue of the American Pomological Society has for years been accepted as the standard authority in rating the qualities of the amateur and commercial apples of the United States and Canada. This catalogue, however, has not been revised for eight years, and it is now felt that under new conditions, especially in view of the recent development in the Northwest, and the peculiar conditions prevailing there, which have re-emphasized the value of some of the older varieties regarded in certain sections as more or less obsolete, it is time to revise and reconstruct this entire catalogue and its ratings. To this end, United States Pomologist Col. G. B. Brackett is sending out circulars asking for present day estimates of the leading varieties as grown in different localities. When these estimates have been received, the data will be collated, and it is expected that the next issue of the Society's catalogue will bring the whole matter thoroughly and accurately down to the present date. This is an exceedingly important work, and the co-operation of fruit growers in all parts of the country is earnestly solicited. This matter will be discussed at the meeting in Tampa, Fla., Feb. 9-11, 1911.

VOCATIONAL SCHOOLS

It is not as generally known as it should be that an important step is being taken by the Congress of the United States for the promotion of trade and industrial schools. Beginning July 1st, 1914, an appropriation of ten million dollars annually will be available for the purpose of establishing instruction in trades and industries, home economics, and agriculture, in public high schools. There is to be one of these schools in each district of not less than five or more than eighteen counties. Each school is to have a branch of the state experiment station established in connection. Another important part of this movement is a special fund for the interpretation and dissemination of experiment station research through extension departments. Beginning with the fiscal year, 1910-11, each state and territory will receive ten thousand dollars to aid its college of agriculture and mechanic arts in maintaining an extension department. This fund will increase each year till each state receives thirty thousand dollars. This will form a very important clearing house for information gathered by the investigation bureaus of each college and station. The whole movement will influence the consolidation of rural and village schools, and thus tend to concentration of effort with larger return from energy expended.

HORTICULTURE FOR WOMEN

Pennsylvania has established a school of horticulture for women. This school is located some eighteen miles from Philadelphia, near the town of Ambler. It offers practical training in gardening and supplements this by instruction in the allied and fundamental sciences of botany and chemistry. The course, from the practical standpoint, is a combination of plant culture and landscape art, with such subjects as might easily be related, as preserving fruits, bee keeping, and poultry raising.

This school is probably the first one of its kind in this country. Most of the European nations have such schools established, as Germany, for instance, which has several, at least two of them being private institutions, charging a good round fee for tuition. In the Pennsylvania school, the expenses appear to be \$425 per year, of which \$125 is a tuition charge. The principal of the school is Miss M. O. Collins, and the instructor in horticulture, Miss E. D. Varley. It is directed by a board of twenty directors, mostly from Philadelphia. A school of this kind has an important place and mission, and its success will undoubtedly depend upon the policy of the directors, the tact and ability of the instructors. The fact that many women are considering opportunities in floriculture, in vegetable growing, and in landscape art, emphasizes the need of an institution of this type.

The action of the New York State Fruit Growers' Association at its last meeting, **GUARANTEEING NURSERY STOCK** in providing a fund for the prosecution of nurserymen who sell stock which is not true to name, establishes a rather unusual precedent. On the face of it, it would appear that the Association is, if the resolution is to amount to anything, entering upon a somewhat troublous period. The fact of the matter is that the nurseryman is no oftener a wilful sinner, nor a scalawag than the planter. There is no more exacting and difficult business in the world than that of the nurseryman. Let him be ever so honest, conscientious, and careful, mistakes are bound to creep in. Errors, owing to carelessness of workmen, or reasonable exigencies connected with the conduct of the business, are sure to occur from time to time. This condition makes the guaranteeing of nursery stock as to its trueness to name a very difficult, and we may say unsafe, practice.

It seems to us that a nurseryman can only exercise his best care to preserve his stock true to name; and of course he need have little doubt in the majority of cases, as, for instance, with the standard lines of the leading fruits; but with new and little known varieties, the condition is very different. In this view of the situation, why should a nurseryman do more than the official state inspector, who says that he has examined the trees and finds them "apparently free from injurious insects, etc., etc.?" The nurseryman uses his best endeavor in propagating his stock, and can send them out under the belief that they are true to name; but it is almost impossible to guarantee the absolute integrity of the run of a season's business. No nurseryman is omniscient, or can be omnipresent, and without these two qualities, and being dependent upon the best assistance he can get, the case falls outside of his absolute control.

We are certain that the State Fruit Growers' Association in taking this step, if it is to mean anything, is borrowing trouble which it will probably regret; for there is frequently as much or more blame to be laid upon the planter than there is upon the nurseryman. The movement may have some educational influence, and we trust this will be the case; but we do not like the inference that nurserymen as a class are a body that must be watched.

Obituary

C. P. ROTHWELL

The death of this gentleman, so well known in fruit-growing circles, occurred in Florida early in January. Mr. Rothwell's home was in Martinsburg, West Virginia. He has been secretary of the International Apple Shippers' Association for the last two years and an active promoter of apple-growing interests. His passing is deeply deplored.

FRED DORNER

In the death of Fred Dörner, the country has lost a man who for nearly twenty years has had a tremendous influence on the florists' trade through his carnation productions. Having come from his home in Baden, Germany, when eighteen years old, he obtained employment with a florist in Lafayette, Indiana, and remained in that work during nearly the whole of his life in the city in which he began it. His death, which occurred on December 29, was due to pneumonia, which he was not able to combat successfully, having been in poor health for nearly a year.

CHARLES P. BRASLAN

Mr. Charles P. Braslan of San José, California, a man still in the prime of life, succumbed to a severe attack of pneumonia on December third. Beginning his business life with John Breck & Sons of Boston, he became, when in his twenties, a member of the seed house of Northrup, Braslan, Goodwin Company of Minneapolis. In 1897, he went to California where his business prospered till, at the time of his death, he had a farm of some 4000 acres given over to seed raising. For some years it has been he who has supplied the government free seeds. A man of genial disposition, enthusiastic and forceful, he will be sorely missed by many who knew him as "Charlie" and "The Major."

ROBERT BUIST, JUNIOR

On December 13th, Robert Buist, Jr., of Philadelphia, passed away at the age of seventy-three, thirty years after the death of his father, who lived to be seventy-five years old. The time of the father's coming to this country from Scotland, 1828, may be said to be the date at which the great advance in horticulture began in this country, and Mr. Buist, Sr., had no small part in bringing about the progress. Robert Buist, Jr., began to be known as a seedsman when but twenty-one years of age, and all through life he strove to improve his business by keeping thoroughly posted on matters horticultural by means of reading and travel. The Robert Buist Company, incorporated, will be continued by the other members of the corporation. It has extended its business far and wide, especially in the South and there will be many who will regret to learn of the passing of Mr. Buist, who up to a short time before his death was still full of vigor and in excellent health.

DEATH OF A NOTED NURSERYMAN

Samuel C. Moon, one of the most prominent nurserymen in the country, died yesterday afternoon at his home near Morrisville. He was in the 57th year of his age and had been ill only a short time.

Mr. Moon was the son of Mahlon Moon, the pioneer nurseryman of Bucks County. He was born at the old Moon homestead, where he passed away. The nursery conducted by Mr. Moon has been in operation since 1848 and contains many rare plants and shrubs, including the largest purple beech tree in the United States. A born nurseryman, Mr. Moon was devoted to his profession.

A widow and one daughter, Miss Jane C. Moon, survive. Two brothers, William H. Moon and James M. Moon also survive, both of them being nurserymen.

The funeral will take place next Wednesday afternoon at 1:30 o'clock.—Trenton Sunday Advertiser, Jan. 22, 1911.

Mr. Moon has long been recognized as an authority on conifers of which he had a very large collection. At the Rochester meeting of the American Association he presented an able paper on this subject. A refined, cultured gentleman, a true plant lover, his loss to nursery growing interests is heavy.

foreign Correspondence

THE PRESENT AND FUTURE OF FRUIT AND FRUIT-FARMING IN SOUTH AFRICA

[Special correspondence of THE NATIONAL NURSERYMAN.]

LONDON, December 14th, 1910.

The South Africa Act of 1909 unites the four self-governing colonies of the Cape of Good Hope, Natal, the Transvaal, and the Orange River, in a legislative union called the "Union of South Africa." From and after May 31st, 1910, the date of the establishment of Union, these four territories ceased to be colonies and became the original provinces of the Union, under their old name, with the exception of the Orange River Colony, which is in future to be known as the province of the Orange Free State.

Some brief facts with regard to South African fruit-growing and fruit industry may not be out of place here. Fruit culture is amongst one of the earliest activities in the old Cape Colony. There, growing grapes for wine making from the South African fruit farms had not until quite recent years any large markets to cater for. Later, however, extended markets have been created reaching even as far as New York, besides such European centers as Hamburg, Antwerp, Rotterdam, Amsterdam and Paris.

HOME MARKETS

The large inland mining towns, which were afterwards linked with the coast by railways, offered a limited market, and then came the discovery that fresh fruit could be shipped overseas for almost any distance with the aid of cold storage. The farmers were not slow to take advantage of the opportunity; but they had much to learn, particularly in regard to the requirements of the export trade. In the first place it was found that the prevailing varieties of fruit were not suitable for the overseas markets. Then the methods of packing had to be learned and the difficulties of transportation overcome. Shippers had to gain their experience by actual experiment, being unable to apply the experience of other countries, in all of which entirely different conditions prevailed. Furthermore, South Africa was alone in shipping fresh apricots, peaches, plums, grapes and melons in large quantities to markets over 6,000 miles distant. All the difficulties of the trade were, however, speedily surmounted. Large orchard companies were formed; capable men with a knowledge of the most modern methods of growing and packing fruit came over from California; new varieties of fruit were introduced; and the old inhabitants soon joined the newcomers in laying out extensive and up-to-date orchards.

There are no figures available at present to show the number of fruit trees in bearing or planted out, but when the statistics now being compiled by the Union Government are published it will be seen that hundreds of thousands of trees are being planted each year, and that the quantity of fruit produced during the last two or three years has increased enormously. The Western Province of the Cape chiefly produces apricots, peaches, pears, plums, grapes,

nectarines, apples, melons, and citrus fruits. The Eastern Province produces apples, citrus fruits, and pineapples, and the main fruit products of Natal are pineapples, citrus fruits, bananas, pawpaws, mangoes, and custard apples. The Transvaal has always produced large quantities of oranges, lemons, and naartjes; but in recent years extensive orchards were laid out with peaches, pears, apples, apricots, etc., by the Government and private enterprise. The Orange River Colony produces fair quantities of apples, peaches, and pears.

FOREIGN MARKETS

Successive Governments in the different South African Colonies have done a great deal to foster the fruit industry, especially the export trade, and their efforts have met with considerable success. Government inspectors examine the fruit at the ports of shipment, and that found unsuitable for export is held back, though only with the consent of the shipper, while fruit found to be of a high standard is stamped with the Government brand. Growers who are beginners and unacquainted with the requirements of the export trade are taught how to pack and grade their fruit by Government experts at a nominal fee. Increased facilities and specially low rates are being provided both on the railways and in the harbors. The Trades Commissioner in London watches the landing and distribution of every shipment of fruit and makes weekly reports as to its condition on arrival, pointing out the mistakes in packing and grading and making such suggestions as will improve the condition of future shipments. This officer also assists the consignees of the fruit in London to develop existing markets and open up new ones. The fruit shippers are also much indebted to the Union Castle Steamship Company, who have not only fitted up their fast passenger steamers with modern cold-storage chambers, but have also from the very beginning done everything possible to ensure the arrival of the fruit in good condition and generally to foster and extend the trade.

Though experiments were made in the export of fruit as far back as 1895, it was not until 1899 that the trade assumed importance. Among the pioneers were H. E. V. Pickstone, chairman of the Western Province Fruit Exporters' Association, a Californian fruit-grower, who went to South Africa about 17 years ago and is now the owner of extensive nurseries and many hundreds of acres of orchards, the Rhodes Fruit Farms, and the Cape Orchard Company. J. X. Merri-man, another of the pioneers, is still one of the most successful shippers of Cape fruit, his brand of peaches being the best known on the London market. Enterprising growers in Natal and the Transvaal, encouraged and assisted by their respective Governments, soon joined in the trade, confining themselves chiefly, however, to citrus and tropical fruit.

SHIPMENTS

The following table shows the number of boxes of fruit exported from South Africa to England since 1899:

1899	10,817	1903	21,968	1907	94,355
1900	17,336	1904	34,723	1908	187,528
1901	17,265	1905	23,832	1909	197,932
1902	14,998	1906	59,866	1910	204,119

Not only is the quantity shipped increasing rapidly but better prices are being obtained owing to the improvement in grading and packing and growing appreciation of the excellence of the flavor of the fruit. The growers are favored by the fact that their fruit is available for the European markets during the midwinter months and at a time when no fruit of a similar kind is procurable from elsewhere. The bulk of the fruit is sold at Covent Garden, London's great fruit and vegetable center, and thence finds its way to almost every town in the United Kingdom.

PROSPERITY IN THE UNITED STATES AS MEASURED BY IMPORTS OF LUXURIES

That the year, 1910, must have been a reasonably prosperous one in the United States is indicated by the figures of importation of the class of articles usually termed "luxuries." No more satisfactory barometer of general business conditions is found than the figures representing the importation of articles purely or chiefly luxuries, including diamonds and other precious stones, laces, art works, wines, tobacco and manufactures thereof, and other articles of this character. This is illustrated by a glance at the yearly record of imports as recorded by the Bureau of Statistics of the Department of Commerce and Labor. In years of marked depression, 1894 and 1895, for example, the value of diamonds and other precious stones imported dropped—from 16 million dollars in 1893 to 5½ million in 1894, 7½ million in 1895, and about 6¾ million in 1896; gradually moving upward again until 1899 and 1900 and reaching a total of 32 million in 1903 and 42 million in 1907. In the fiscal year, 1908, a year of business depression, the total fell to 16¾ million dollars, returning to 29 million in 1909, and 48 million in the fiscal year, 1910, while the figures of the calendar year will not materially differ from those of the fiscal year.

The figures of diamond importations above cited are merely an example of the evidences of prosperity supplied by the figures of imports. In automobiles, art works, laces, feathers, furs, wines and liquors, tobacco, decorated chinaware, and numerous other articles named in the list of importations, the figures of 1910 are large, and the importation of articles usually classed as "luxuries" will show a total of between 200 and 300 million dollars' value. Of laces and embroideries alone the value imported during the year just ended approximated 45 million dollars, a very large proportion of which was of cotton. This class of importations also shows considerable fluctuations according to conditions of prosperity or otherwise, though the fluctuations are not as great as in the case of diamonds. The value of cotton laces, embroideries, etc., imported in the fiscal year, 1893, was 12¾ million dollars and dropped in 1894 to eight million dollars. Again in the 1907-8 period of depression, the value of importations of this class dropped from 39¾ million dollars in the fiscal year, 1907, to 33¾ million in 1908, returning to 34½ million in 1909 and 36¾ million in 1910.

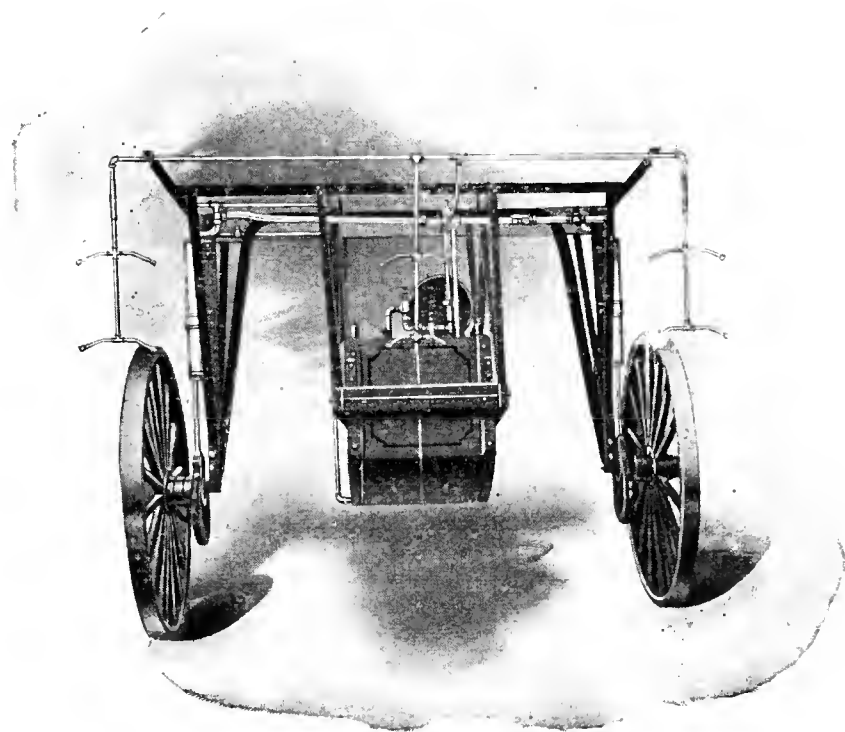
Among the other articles of importation in 1910, which are usually classed as luxuries are: Silk laces, 4½ million dollars; laces of flax and other similar fibers, 4 million; tobacco, cigars, etc., 33 million; furs and fur skins, 25 million; art works, 21 million; spirits, wines and liquors, 20 million; feathers and flowers, natural and artificial, 11 million; toys, 8 million; mahogany, 3½ million; jewelry, 2 million; manufactures of gold and silver, 2 million; and beads and ornaments, perfumeries, cosmetics, shells, orchids, pipes and smokers' articles, and musical instruments in various sums between 1 million and 2 million dollars each.

The principal sources from which these luxuries are drawn are, in the case of manufactures, Europe; in the case of tobacco, mahogany, and other articles of this class, the tropical sections; while the 25 million dollars' worth of furs and fur skins originate largely, of course, in the frigid or semi-frigid sections of the world. Most of the imported laces, whether of cotton, flax, or silk, are made in Switzerland, France, Germany, Belgium, England and Ireland; most of the tobacco and cigars come from Cuba; most of the art works, from various European countries, and most of the toys, from Germany.

Business Movements

AN ATTRACTIVE CATALOGUE

There has just come to our desk an inviting publication in the form of the catalogue of the Harrison's Nurseries, of Berlin, Maryland. The peach on the cover looks good enough to eat. We refer to the one on the branch of the tree and not to the picker. The inside front cover shows a fine plate of the Yellow Transparent apple, while the inside back cover is devoted to the Klondike strawberry. The body of the catalogue is made up of attractive scenes in orchard and nursery, reproduced in half tone. This progressive firm is among the prominent plant growers of the country. Their reputation is a synonym for quantity and quality.



A NURSERY SPRAY RIG

Fig. 325 represents a one horse traction power nursery stock sprayer, especially designed for large stock, planted in rows 3½ feet apart. The wheels track 7 feet and attached to the inner hub of each wheel is an eccentric which drives a pump on either side.

The pumps operate independently of each other and generate sufficient power to supply 12 nozzles. The machine is constructed entirely of steel with a heavy arched axle, suitably braced, and carries a solution tank which holds 65 gallons.

The illustration shows the rear view of this machine with the spray boom in position. The machine straddles two rows of trees and will operate successfully in trees 6 or 7 feet high. The trees pass under the arch and between the wheels and the solution tank.

This machine has been tested and is recommended by users, notably Mr. D. S. Lake, of the Shenandoah Nurseries, Shenandoah, Iowa.

Attention is called to the arrangement of the nozzles. They are so arranged and so placed as to be easily set in any position, and the 12 nozzles thoroughly cover 3 rows of trees. It sprays complete the two rows that pass under the machine, and the inside of the two adjoining outside rows.

The tank is made of cypress, the pumps and piping are of solid brass. The difficulty with a machine of this kind heretofore has been the heavy draft. While this machine will require a heavy horse, the manufacturers guarantee that one horse can operate it successfully. The above is made by the E. C. Brown Company of Rochester, N. Y.

Legislation

PROPOSED MISSOURI INSPECTION LAW

A bill endorsed by a number of rural organizations in Missouri, and now being backed by the State Board of Horticulture, will probably be presented to the Legislature, and will very likely become a law in Missouri this winter. It is briefly as follows: Nursery and orchard inspection is provided; nursery inspection is enforced. No nursery stock can be shipped without certificate. On the orchard side, the proposed law will inspect orchards, and if found to be infested with injurious insects or diseases, the owner will be ordered to clean up the stock, and failing to do so, the work will be done under the direction of the State Entomologist and the expense charged against the property.

NEW YORK ORCHARDISTS RAISE PROTECTIVE FUND

At the last meeting of the State Fruit Growers' Association, a rather unusual and somewhat unique step was taken by this Association, avowedly for the purpose of encouraging honest nurserymen and discouraging dishonest ones. A resolution essentially as follows was passed: "That a protection fund be established by the separation of \$200 of the funds now in the treasury and that this amount be increased by ten cents for the annual dues of each member, beginning with 1911, such reservation to be continued until the fund shall meet \$500, after which only such amounts shall be so reserved as shall maintain the fund at \$500." The protection fund is to be used to protect members against unfair dealing by nurserymen, especially in the delivery of stock not true to name; and the executive committee is authorized to prosecute or aid in the prosecution of the nurserymen in such cases in any manner it may elect, when such prosecution is authorized by a majority vote, either verbal or written, of the executive committee. The resolution also provided for the rescinding of the motion upon brief notice at future regular annual meetings.

NOVA SCOTIA FRUIT GROWERS FAVOR FREE TRADE IN FRUIT

At a recent meeting of the Nova Scotia Fruit Growers' Association, the following resolutions were adopted:

1. That the Nova Scotia Fruit-Growers' Association commend the action of the Federal and Local Governments in desiring to remove restrictions on trade between Canada and the United States, recommending a free interchange of fruits, agricultural implements, fertilizers and insecticides.
2. That the Dominion Government be urged to appoint at once a director, and begin tests on the Fruit Experiment Station lately established.
3. That, in the opinion of the Association, the subject of Agriculture be added to the High School curriculum—at least, as an optional subject—with special teachers trained at the Agricultural College.
4. That the Government take steps to make the annual exhibition more satisfactory than at present.

NOTED CROWN-GALL CASE SETTLED

In the spring of 1909, The New England Nurseries, Inc., of Bedford, Mass., sold and delivered to D. Roy Smith, at Pickering, N. H. a bill of nursery stock. Included in the list, were something over two thousand apple trees, which were accepted and planted. In due time the nursery demanded payment for the stock, and Smith refused to pay, claiming that the apple trees were so affected with crown gall as not only to be practically worthless for orchard purposes, but also to such an extent as to cause him great damage, by rendering his land, where the said trees were planted, unfit for the growing of apple or other fruit trees, and necessitating the removing of the trees in question and the soil in which they stood, at great expense. He, therefore, presented a counterclaim against the nursery for damage so resulting of over six thousand dollars (\$6,000.00).

Therefore, on December 30, 1909, the Nurseries and Smith entered into a formal written agreement for arbitration of their claims against each other, under Chapter 194 of the Revised Laws, agreeing that the judgment rendered upon the award of the arbitrators by the Superior Court of the County of Suffolk, of the Commonwealth of Massachusetts, should be final.

The arbitrators chosen were Hon. J. L. Ellsworth, Secy. State Board of Agriculture; Frank W. Rane, State Forester, and Wilfrid Wheeler, Secy. New England Fruit Show Association.

The points which the arbitrators were called upon to determine were as follows: 1. Was the stock so affected with crown gall and root gall as to be worthless for orchard purposes? 2. Was the soil so infected by the planting of the said trees as to be rendered unsuitable for orchard purposes?

Five hearings were held during the year, for the taking of preliminary arguments and evidence, and one for the hearing of final arguments of council. The case was gone into in detail, a great deal of oral and documentary evidence being submitted by each side. Horticulturists and bacteriologists from various agricultural experiment stations, nurserymen, and fruit-growers from different sections appeared before the arbitrators. A large amount of correspondence and a number of publications on the subject of crown-gall and root-gall were also submitted as evidence.

The arbitrators spent two days reviewing the evidence and the following is taken from their report:

The arbitrators have gone into the evidence presented with great care and find some evidence that the stock was affected with crown gall and root gall, though it is difficult to judge of the extent of the presence of these diseases. The expert evidence submitted, however, showed such a wide divergence of opinion as to the harmfulness of these diseases as to render it an open question as to just what the effect of their presence was on nursery stock.

We find therefore, that D. Roy Smith suffered no appreciable damage from the nursery stock in question being affected with crown gall or root gall, and that he is not entitled to set off any claim of damage on this ground against the claim of the New England Nurseries, Inc.

The finding of the first question naturally carries with it the finding of the second. Here, again, there is such a conflict of opinion among acknowledged experts as to the effect on the soil, in regard to subsequent plantings, of the introduction of crown gall or root gall, as to make it impossible to determine what the effect of such introduction actually is. There seems to be less reason to suppose that future plantings of fruit trees can be affected with these diseases, because of infection of the soil, from former plantings, than to believe that the original trees are adversely affected by the presence of these diseases. There is surely no certainty that the soil would become so infected with these diseases as to render it unfit for orchard planting, or so infected as to require the removal of any portion of the soil before such planting.

We find, therefore, that D. Roy Smith suffered no appreciable damage by reason of this soil becoming infected with crown gall or root gall from the stock furnished by The New England Nurseries (Inc.), and that he is not entitled to set off any claim of damage on this ground against the claim of the said company."

"We find therefore, that the New England Nurseries (Inc.) is entitled to recover from D. Roy Smith the sum of \$——."

ADDRESS OF PRESIDENT SKINNER BEFORE WESTERN ASSOCIATION OF NURSERYMEN.

Mr. Skinner spoke in part as follows: We meet here as an organization of nurserymen, not coming together solely for business purposes, but to meet each other in a friendly way, and talk about matters that are of mutual interest.

I think this organization should feel proud of the work it did, or helped to do, in entertaining the members of the National Association at the Denver meeting. I am sure we all are grateful to our Committee who had charge of the entertainment program. They worked hard without pay, but they have the satisfaction of knowing that as a committee they were a success.

There are a few matters I would like to call to your attention. You will remember the remarks that were made about the Inspectors at the Denver meeting. A goodly lot of fire-works were set off on their account, and some rather mean things said. Now I think that was a mistake and cannot result in any good. I believe this Association should try to get on friendly terms with the Entomologists and Inspectors. Let us treat them in a friendly spirit. True, some of them have given us trouble in the past, but they are not altogether to blame. They did not make the laws and I think the majority of Inspectors are honestly trying to do their duty.

DO THE RIGHT THING

My first nursery consisted of one hard maple tree that some forty years ago I found growing in a fence row. I saw it might make a nice tree if properly pruned and a year or two later planted it near the house. I took much pleasure in watching the development of that tree, and while I have been many years away from the old home the tree that I cared for still stands and has been a comfort and pleasure to all who have occupied the house. Let us remember then, that we are building for the future as well as for the present. While our profits may be small, yet we can have the satisfaction of knowing that we have done a good work, and that much of that work will live after we are gone. I know full well that our business must be profitable or we must cease to carry it on.

STUDY CONDITIONS

I am inclined to think that many of us are trying to grow stock that will not grow readily in the locality in which we are working, and cannot be produced at a profit. Would it not be wise for us to pay a little more attention to the cost of growing and discontinue the planting of stock that we are sure will not be to our profit? Would we not better buy the stock we cannot grow profitably from the nurseryman who is more favorably located, and put in our time and labor growing those things we are sure we can produce for less than the average market price? I know from my own experience how hard it is to give up trying to grow a general line of stock. We all want to be known as nurserymen

growing a general line, so we keep on planting stock we know has not paid us in the past, hoping the next season may be just what that particular plant needs, but alas, the profitable years are so far apart; the lean years so numerous. It has taken me some years to reach the point where I am ready to put my ambitions aside and say that I will try to grow only the things that I think we can grow profitably, and let the other man be the big nurseryman, who is favored with a greater variety of soils and a more favorable climate. However, I do not wish you to think that I am advising you to get into a rut. By no means. Grow, or try to grow, all that you would like to grow, but do it on a small scale. Make your plant of the unprofitable stock more of an experimental plant, and do not work on a large scale until you have found a way of growing that plant profitably.

REASONABLE PRICES

A nurseryman should be paid, and well paid for his work, but it cannot be profitable to sell trees for five and one-half cents when they have cost eight and one-half cents to grow. In 1905, a paper on the cost of growing a tree was read by Mr. H. L. Bird before the National Association. In this article he showed that by a little care it would be possible to determine the cost of growing a tree. Few of us, however, can tell what it costs to grow the different kinds of trees we have in our nurseries. This should not be, and is not in other lines of business. Manufacturers know what it costs to make any of their products. It would be well if nurserymen paid more attention to these things. I am aware that it would be a difficult matter to get the exact cost of producing a certain tree or plant, but we could calculate closely enough for practical purposes.

STUDY VARIETIES

I would like to suggest here the advisability of nurserymen acquainting themselves with the fruit business, that is, note what kinds are in greatest demand and the market prices. Some kinds that have long been standard sorts may be superseded by others. By keeping ourselves posted along these lines we may anticipate the wants of the orchardist, and have the trees when he calls for them. During the past few years there has been an increased demand for ornamentals. Here in the middle west people are paying more attention to the planting of this kind of stock and this demand will continue. Nurserymen in this section can help to increase the interest. Every nurseryman should make his grounds, particularly about his home, as attractive as possible. Let it be an object lesson to the public. I think too little attention is paid to the care of our grounds. It will pay as an advertisement, to say nothing of the pleasure we can get out of it ourselves.

ST. LOUIS MEETING

Now a word about the St. Louis meeting. The Western Association should work for a large attendance. Not only urge that our members attend, but use our influence to induce nurserymen not members to meet with us at St. Louis. I would offer as a suggestion that a committee be appointed to prepare a letter of invitation and instruct our Secretary to mail a copy to all nurserymen in the middle west.

Nursery inspection and the various State Laws governing inspection and shipment of nursery stock has been a source of anxiety to nurserymen for some years. But nursery inspection is with us to stay. The planter is entitled to protection and it is right that all nurseries be examined for insect pests. Our greatest inconvenience comes from laws passed in some states governing interstate shipments. Now, we are not likely to get relief by a national inspection law, but we may hope that some of the more stringent state laws will be modified and that there will be a move toward more uniform state laws.

MEETING OF NURSERY INSPECTORS

The Ninth Annual meeting of the Horticultural Inspectors was held in Minneapolis, Minn., on the 29th and 30th of December, 1910. This association has never until the present had a constitution and by-laws. Both were adopted at this meeting. Officers elected for the ensuing year were as follows: President, Franklin Sherman, Jr.; vice-president, T. J. Headlee; secretary-treasurer, T. B. Symons; members of Executive Committee, J. B. Smith, H. T. Fernald, J. W. Jeffrey.

The active members of the association consist of the person or persons of each state, country or United States Department of Agriculture, or their authorized representatives, under whose authorities, certificates of inspection are issued.

Associate members consist of assistants and co-workers in official service. The proceedings of the meeting, including all business transacted, will be published in the forth-coming issues of the Journal of Economic Entomology.

The attendance was fair, about thirty-five states being represented.

The members of the association are under much obligation to Prof. F. L. Washburn, State Entomologist of Minnesota, and retiring president of the association, for the excellent arrangements for the meetings and for the many courtesies extended.

Albany, N. Y.

GEO. G. ATWOOD,

Chief, Bureau of Horticulture and Nursery Inspection.

MONTANA

The State Nursery Company, of Helena, Montana, has glowing hopes for a busy seed season. The seed department has received requests for the Company's 1911 catalogue from many states, and the local trade promises to establish an easy record. Five cars of Montana-grown alfalfa seed have just arrived, and the Company's seedsmen are busy cleaning and storing it.

The State Nursery Company, of Helena, Montana, will have their big 1911 catalogue from the printers in a week or so. Work is still being put into it, for the aim of the Company is to send out the best and biggest catalogue yet issued by the firm, and it will reach more people than ever before.

Greetings in the form of attractive post-cards have been received from Messrs. W. Van Kleef & Sons, Boskoop, Holland, and Conrad Appel, Darmstadt, Germany. The former are nursery stock growers, while the latter are among the prominent seed growers of Germany.

Note and Comment

PRODUCTS OF THE GRAPE

UNFERMENTED BEVERAGES

In thinking of the products of the grape, the lay mind is wont to travel back to the Scriptural records of early days and associate the grape in beverage form with the experiences of Noah, especially as these are but a type of the all too common occurrence of the twentieth century. The public is not sufficiently aware that the juice of the grape is both healthful and appetizing in the unfermented form. Nor is the public sufficiently aware that a few enthusiasts in the rational use of the grape have made noted progress in placing upon the market delectable beverage forms of the fruit of the vine.

THE RANDALL GRAPE JUICE CO.

Chautauqua County, New York, has long been the noted Concord grape producing area of the Northeast. There is located at Ripley in that county the Randall Grape Juice Company, of which Mr. F. N. Randall is president and treasurer. This gentleman has been instrumental in furthering the sale of grape juice as a table beverage by his skill and ingenuity in manufacturing pleasant and agreeable brands. He has long been an advocate of the healthfulness of the grape in this form, and has been instrumental in making it one of the leading non-alcoholic beverages of the United States. Mr. Randall is known as the originator of the method of carbonating grape juice, that is, adding carbonic acid gas to the expressed juice, giving it piquancy and the soda water characteristic so much in demand by the American people. While the quality of the juice is in no way injured, it is vastly improved to the taste of many by this addition.

Although the progress made in popularizing this healthful product has been great, it is unquestionably true that it is only in the beginning of a great future. The Randall Grape Juice Company may properly feel that they have had an important hand in an undertaking which is important industrially, but which is basic and fundamental in its effect on the morals and health of the people.

NURSERYMEN PRESENT AT WESTERN NEW YORK HORTICULTURAL SOCIETY

This meeting usually draws a number of the prominent nurserymen of the East, and among those present were Messrs. Irving Rouse, Hooker, William Pitkin, C. J. Brown, John Charlton, Eddie Osborn, and others of Rochester. Messrs. F. M. Hartman, Maloney Brothers, and representatives of Stark Brothers, from Dansville. George S. Josselyn, of Fredonia; Nelson Bogue, Batavia; J. H. Dayton, Storrs & Harrison Company, representatives of J. G. Harrison Company, Berlin, Maryland, and many other firms.

Correspondence

PEDIGREE TREES

Editor NATIONAL NURSERYMAN:

We realize that technically speaking the term "breeding up" is not correct, but it seems to be the most expressive way for us to get it before the people. We do not think this should be misleading to them, since the manner of the work is fully described.

We have noticed one thing especially the last few years among large commercial planters: They specify a certain size and consider that altogether without paying any attention to the way the stock is propagated. Thus, they often get trees grown from water sprouts and forced to make a large, woody growth on rich land, which are likely to be sadly lacking when it comes to quick bearing.

This year we noted there were thousands of such scions gathered, instead of the terminal fruit wood, which we believe to be right. We shall be glad to see the day come when people will appreciate quality instead of the size of the package, and there seems to be considerable progress along that line.

THE WINFIELD NURSERY CO.,
Per J. MONCRIEF.

Note: This is undoubtedly the right view. Selection in orchard fruits should count just as much as it does in most other lines of plant improvement. The principle is right though the nomenclature may be wrong.

A WORD ON PRICES AND THE GENERAL CUSSEDNESS OF OUR COMPETITORS

MR. EDITOR:

Now, what we started out to say was this. The nursery business is in a surprisingly bad condition. Great Scott, what is wrong with it all? Are there no business men with business methods in charge of things? On every hand we see the same old story, all manner of prices! Just today we had a beautiful instance and a common one. We were asked to quote on a line of stock, for a gentleman who has but lately embarked in the fruit business. The order, a nice one, at our prices amounts to better than two thousand dollars. We quoted and were shown other quotations. One line ran from \$10.00 to \$45.00 per 1000, another from \$15.00 to \$40.00, another from \$17.50 to \$50.00. We were asked what was wrong, and could offer little more than the old explanation. We quoted on a nice order a week ago; one of the largest firms in the business had already quoted the same prices practically as ours, and note, ours are always the same. Hearing we had quoted, and fearing we would get the order, our friends immediately stated that they would discount any prices we might make by 25 per cent. We got our price and the gentleman will we believe never deal again with the firm mentioned. Oh, it's very rotten. Someone should come along and line them all up! What do you think?

X. Y. Z.

Note: We think the millenium is not yet!—EDITOR.

NURSERY IMPLEMENTS IN CALIFORNIA

Editor NATIONAL NURSERYMAN:

1. As far as implements for working the soil are concerned, we are not using anything which is new.

2. Yes, we use a sub-soiler. This is the type with the standard and the blade at the base slightly concave. We have found this sub-soiler a very efficient tool in planting grape cuttings. We plow out a dead furrow, and then run the sub-soiler twice in this furrow. This loosens up the ground so thoroughly that we have no difficulty in planting a quarter of a million grape cuttings a day with a crew of forty men.

4. We do not use tree strippers. We do no digging in California in the fall, and have never had occasion to try them. With some classes of trees, like apples, which do not lose their leaves until January, a tree stripper, no doubt, if it is perfected, could be used to advantage.

5. We use the Bean Spray Pump.

6. Among the valuable new fruits which we are introducing, and which have been tested out thoroughly in California, are the: Crocker Bartlett Pear, Burbank Cherry, Formosa Plum, Tilton Apricot, Pineapple Quince, Gaviota Plum, Sims Cling Peach, Jordan Almond, Santa Rosa Plum, Royal and Paradox Timber Walnuts, Calimyrna Fig and many varieties of Capri figs, Sevillano and Ascolano Olives, Jujube (Chinese date plum), Dattier de Beyrouth and Sultanina Rosea Grapes, Mammoth Blackberries, Morse Strawberry.

We are also for the first time introducing two new fruits of Mr. Luther Burbank, viz.: the Standard Prune and the Patagonia Strawberry, both of which promise to be very valuable acquisitions.

THE SEASON

The indications for a favorable nursery season are very good indeed. The planting will be very extensive providing the rainfall is favorable. Thus far the rainfall in California has been very light, and this condition of affairs always has a discouraging effect on planters. The demand for the general run of deciduous fruit trees in California will be for pears, apricots, prunes, almonds, walnuts, peaches. In some of the higher localities in the coast region, there is an active demand for apples. The call for citrus trees will be fully as heavy as it has been for the last two or three years, with exceptionally good prices for this class of stock. There is a heavy demand for olive trees, in fact the demand far exceeds the supply. The purity of California Olive Oil is creating a very heavy sale for this product, and the demand for ripe pickles has developed to such an extent that the factories in California are not able to supply the demand, largely due to the fact that they cannot get sufficient material from the growers. This will undoubtedly be the great center for supplying pure olive oil, not only for the United States, but all over the world. If anything, the conditions in the interior valleys are more favorable for the growing of olives than along the Mediterranean.

FIG CULTURE ON THE COAST

The "Calimyrna" fig has been fully tried out in California, and the insect necessary for producing it has also been thoroughly established, and it is only a question of time when California, particularly the interior valleys, sections of Arizona, New Mexico and Mexico, will be producing sufficient figs, not only to supply the United States, but Australia, and it would not surprise me at all, if we finally shipped figs to Europe. If anything, the Calimyrna figs grown in California are very much sweeter than the imported figs, and the greater care with which they are handled is sure to create an active demand for them.

Very truly yours,
GEO. C. ROEDING,
President and Manager.

OREGON NURSERY CONDITIONS

Editor NATIONAL NURSERYMAN:

Your favor of Nov. 25th was duly received, and answer delayed, expecting to be able to get some of the information you desired from our growing department; but up to date we have not been able to get hold of this information on account of the busy digging and shipping season we are passing through. Later, we will try and send you information you request upon implements and labor saving machinery.

We may say, however, in answer to your fourth question that tree strippers have not been found practical in our section of the country and we have not been able to get any service from them. So far as Pacific Coast conditions are concerned, we believe they are of no value to the nursery business.

We cannot at this time name any new fruits of exceptional merit that have been introduced just lately. We are testing out several new varieties ourselves, but at the present time do not care to say anything about them. Probably at some future date, we may be able to give you some information along this line.

Referring to general nursery activities on the Pacific Coast, will say that there never has been a time in twenty years in which there was so great a demand for nursery stock and such a low supply of number one grades in the standard varieties as this year. At the present time, there are very few trees of number one grades in commercial sorts left unsold. This is largely due to shortage in growth amongst the growers of bench grafted trees in the irrigated sections. Apples are leading in demand again this year, as they have in the past two years, and it looks now as if the big boom in apple planting on the Pacific Coast would continue for at least another year, as preparations are being made now for extensive activities in this line for next season. Weather conditions on the Pacific Coast have been ideal for nursery and other outdoor work during this fall, and everything is in good shape at the present time.

M. McDONALD,
Oregon Nursery Co.

VALUABLE INFORMATION ON IMPLEMENTS

The following implements are some of the best for nursery cultivation:

Clark Cutaway Harrow; Drags of weather-board—2 in. lumber; Captain Kidd Cultivator, (Disc); Shovel Cultivator for heavy work, (Avery Comet No. 6); Best all-round Shovel Cultivator, (Racine-Sattley); Surface Cultivator, 3-row gang, (Stark Bros.).

This last item is our own design; takes one team, a man and two boys to cover three rows. We use sub-soilers for fall plowing, and the Louisville for spring planting. The latter is manufactured by the Avery people of Louisville, Kentucky, and is more of a stirring sub-soiler than a diamond built plow. The turtle-back sub-soiler is also good for stirring the ground in the spring.

The tree stripper is a great labor-saving device, and is of great value in our work from the middle of the digging season until late fall digging. Of course it can not be used in the early part of the digging season or in the hot weather as satisfactorily as later on. It will strip from 50 to 100 trees per minute, and Prof. Taylor, when he was here, kept tab on the men, and they handled as high as 260 a minute.

The wrapping machine is another one of our Mr. Reed's labor-saving implements, and is very satisfactory. It does good, smooth work, and does it fast.

SPRAY OUTFIT

We have a spraying outfit, adapted from the old Pierce-Loup type. We have a gasoline engine and the compressor in the middle of the wagon, with the barrels, etc., on the front end. Across the back end of the wagon, we have eight 26-gallon steel tanks which serve as a reservoir for the air. We have a one and two-horse cart which straddles the rows, each carrying a 50-gallon tank for compressed air, and a 50-gallon tank for spray liquid.

Think you already know of the King Philip grape and Early Elberta peach; also, we have a red grape from Mr. Riehl, the Delicious, and are sending it for trial.

Stark Nurseries and Orchards Co. W. H. STARK.

DEVELOPMENT OF THE PECAN INDUSTRY

As it comes to me from observation and contact with men interested in the development of land enterprises, I am forced to the conclusion that interest in pecan culture is spreading. As a basic natural industry, it is bound to enjoy large popularity. I do not close my eyes to the extreme probability that there will be occasional disappointments, born of misconceptions and perhaps misinformation. These are incident to the development of all kinds of enterprises, more particularly, however, of those which have soil and climate, coupled with management as the controlling factors. In the case of the pecan, I believe that the industry, properly managed, is as sound for the intelligent grower as it is for the honest promoter.

J. C.

EASTERN NURSERYMEN'S PROTECTIVE ASSOCIATION

This association met in Rochester the week of the meeting of the Western New York Society, and elected officers for the coming year; the officers of the previous year were re-instated. Routine business was transacted.

GROWTH OF NEW YORK STATE FAIR

Interesting Figures Dealing with Fruit Department

State's Annual Exposition Now Valuable in Promoting Great Interests. Review of Permanent Fair Movement

The remarkable growth and development of the New York State Fair in recent years is told in the turning over by the State Fair Commission to the State Treasurer at the end of the year of approximately \$71,000, representing the surplus of 1910, and in a comparison of the figures dealing with the expositions of 1907 and 1910.

That New York's annual exposition has come to be of great value in the promotion of the fruit growing and other great interests of the Empire State, there is no longer any doubt. The efficiency of the management under the present State commission has been developed to a high degree. The producers have been encouraged, the exhibits have been more in keeping with the rich industries they represent and the interest of the general public has been drawn forcibly to the things which make New York first state in the Union.

In considering the unusual success scored by the State Fair of 1910, when the record attendance for the week of 197,000 was reached, a brief review of the history of the greater fair movement is interesting. While the Fair showed increased life each succeeding year after the State took over the plant twelve years ago, it was not until the establishment of a business-like commission and the adoption by the Legislature of a permanent grounds plan that the success of the exposition became really great.

In 1906, the Legislature appropriated \$10,000 for a competition among architects for the best plan for the development, comprehensively and harmoniously, of the Fair property, the desire being to replace the wooden structures, many of which had outgrown their usefulness, with permanent structures of steel, concrete and brick. About thirty-five architects competed and after careful consideration the plan submitted by Messrs. Green and Wicks of Buffalo, was accepted by the Commission and subsequently adopted by the Legislature. All work on buildings and grounds has since been along the lines of this general plan. The estimated cost of the permanent plant was fixed at about \$2,000,000 and thus far the Legislature has appropriated between \$600,000 and \$700,000, the money being used for the Manufacturers and Liberal Arts Building, a magnificent structure and regarded as one of the finest fair buildings in the world, the Grange, Dairy and State Institutions buildings, new stables, sewers and grading.

The need of a new Horticultural Building has been recognized by the State Fair Commission, the fruit growers and the farmers, but the Commission has felt that in carrying out the permanent development plan it must proceed along the most economical lines and utilize the available appropriations to the best advantage possible. The Horticultural Building is in fair condition and could be maintained for two or three years without very much expense while other buildings have been in bad order making it necessary to replace them with new structures or spend large amounts of money in repairs and alterations. Unfortunately for the fair, while the Legislature of 1910 appropriated about \$250,000 for new structures, Governor Hughes, in meeting the other demands upon the State's finances was forced to cut the items from the appropriation bills.

It has been the aim of the present Commission to conduct its affairs along strictly business lines and to handle the management as economically as if the members were directors of a business corporation and this is evidenced by the following figures:

The present Commission was appointed in April, 1908, and the figures given are a comparison for the years 1907 and 1910.

In 1907, the appropriations made by the Legislature for insurance, advertising, premiums, maintenance, and salaries, were \$70,000.

For 1910 for the same items, \$105,000, the larger increases being in premiums \$12,000 and maintenance \$5,000.

The receipts of the Fair were: 1907, \$81,000; 1910, \$148,000. an increase of about 80 per cent.

The surplus returned to the State Treasurer was: 1907, \$20,000, 25 per cent of the receipts; 1910, \$71,000, 48 per cent of the receipts; an increase over 1907 of 250 per cent.

The net cost to the State was: 1907, \$50,000; 1910, \$34,000; a decrease of 32 per cent.

The admissions were: 1907, 142,000; 1910, 196,000; an increase of 38 per cent.

The various departments of the Fair are placed under the direct control of the several Commissioners and the value of this method of management has been clearly demonstrated. It allows the Commissioner an opportunity for studying closely a branch of the fair system, for keeping in touch with the interests represented by the department, for considering the needs in the way of classes and premiums as demanded by the producers and the general public and the Fair profits by the experiences of preceding years.

The Fruits, Flowers and Farm Produce departments have been in charge of Commissioner William Pitkin of Rochester during the years, 1908, 1909, and 1910, and the successes scored tell of Commissioner Pitkin's interest and the energy devoted to the departments.

No direct changes were made in these departments during the first year, 1908, as it was thought wise to investigate carefully and to observe the conditions, the sentiment among exhibitors and the general interest shown in the fair and the exhibits. The changes since made have been carefully thought out and results show that they have met with the approval of the exhibitors and the patrons of the Fair. Further improvements and benefits will accrue from changes already made and additional advancement may be hoped for through other changes now under consideration.

The following comparative statement shows the number of exhibitors and exhibits of: (1) the county and grange societies; (2) the leading commercial varieties of fruit; (3) commercial packages; (4) nursery stock, in the years 1907 and 1910 and the percentage of increase.

	1907	1910	Per Inc.
Number of exhibitors	25	142	468
Premiums offered	\$2,665	\$3,599	35
Premiums paid	2,033	3,360	65
County and Grange exhibits	3	8	166
Collections of fruit	8	44	450
Baldwin apples, single plates	4	67	1575
McIntosh apples, single plates	2	29	1350
King apples, single plates	2	56	2700
Rhode Island Greening apples, single plates	4	77	1825
Northern Spy apples, single plates	5	47	840
Fifteen leading commercial apples	59	533	804
Twenty-eight leading commercial varieties of apples, pears, plums and grapes	117	761	650
Apples packed in boxes	0	32	
Nursery stock	0	12	
Collections of fruits exhibited by boys and girls	0	24	

The premium list for many years contained prizes for a long list of varieties not generally grown and distributed but grown principally by one or two people. Many of these varieties were

eliminated from the premium list and the money added to the commercial sorts which are generally grown and which interest the orchard man and the farmer.

In 1907, it cost \$2 to enter a plate of Baldwin apples and the first premium was \$1.50. In 1910, there was no entrance fee for a single plate of Baldwin apples and the first premium was \$25. The advantage of this change when considered from an educational viewpoint will be appreciated when it is seen that the number of plates of Baldwin apples in 1907 was 4 and in 1910, 67, an increase of 1575 per cent. A like increase is shown in other commercial varieties like McIntosh, King, Northern Spy apples, Bartlett pears, Elberta peaches, etc.

Additional entries mean a greater number of exhibitors, more interest, and better advertising and attendance. There has been shown a much greater interest on the part of county and Grange societies. In 1907, but three of these societies made exhibits, while in 1910, the fair secured exhibits from eight such organizations.

Other new features have been added during the past two years, for instance, the exhibit of pears and apples in boxes, nursery stock and collections of fruits by boys and girls under sixteen years of age.

The large fruit societies of the State, the New York State Fruit Growers' Association and the Western New York Horticultural Society have maintained large and beautiful displays of fruits which have added largely to the attractiveness of the department.

Catalogues Received

Thomas Meehan & Sons, Dresher, Pa. Price list of young ornamental trees, shrubs and vines for planting in nursery rows, January 1st, 1911.

Fritsch & Becker, Seed Merchants, Grosstabarz, Germany. Special trade list of conifer and other tree seeds.

Huntsville Wholesale Nurseries, Huntsville, Ala. Price list, January, 1911.

Stark Bros. Nurseries and Orchards Co., Louisiana, Missouri. Bulletin No. 71 issued by special service department, of one-year trees.

Fletcher & Harrison Nurseries, Cleveland, Tenn. Price list of one year peach, to the trade only.

R. & J. Farquhar & Co., 6 and 7 South Market St., Boston, Mass. "Farquhar's Garden Annual," 1911. A large publication of over 130 pages, fully illustrated.

Luther Burbank, Santa Rosa, Cal. Circular describing Mao-Li-Dzi, Chinese climbing plum.

McHutchison & Co., 17 Murray St., New York City. "Just Bays," a booklet composed entirely of illustrations.

Royal Palm Nurseries, Reasoner Brothers, Oneco, Florida. Annual catalog for 1911. Cover handsomely decorated with palm leaves in colors.

B. G. Pratt Co., 50 Church St., New York City. "Orchard Dividends," a pamphlet giving testimonials in regard to the efficiency of "Scalecide," with prices.

Chr. Lorenz, seed grower and merchant, Erfurt, Germany. General catalogue for 1911 of vegetable and flower seeds, bulbs, etc. Fully illustrated.

J. K. Henby & Son, Greenfield, Ind., Wholesale trade list.

Brown Bros. Co., Rochester, N. Y. Wholesale trade list.

E. Turbat & Co., 69 Route d'Olivet, Orleans, France. Wholesale catalogue of Roses and Nursery Stock.

Mt. Carmel Nursery & Forestry Co., Hartford, Conn. Catalogue of Forest Trees.

Conrad & Jones Co., West Grove, Pa. New Floral Guide 1911.

David W. Thomson, Edinburgh, England. Trade list.

Knownfield Nurseries, Carlisle, England. Trade list of Trees and Shrubs.

Jacques Hasslach, St. Remy de Providence, France. Seed catalogue.

Dicksons Nurseries, Chester, England. Wholesale catalogue of Shrubs and Covert Plants, etc.

Henry A. Dreer, 714 Chestnut St., Philadelphia, Pa. Wholesale price list of Seeds, Plants and Bulbs for Florists.

Chase Bros. Co., Rochester, N. Y. Wholesale price list for 1911.

John Lewis Childs, Flowerfield, L. I., N. Y. Price list of choice Gladioli.

Alma Nurs., Oudembosch, Holland. "A Spring Reminder."

Jewell Nursery Co., Lake City, Minn. Wholesale trade list.

Evergreen Nursery Co., Sturgeon Bay, Wis. Catalogue and price list.

Tennessee Wholesale Nurseries, Winchester, Tenn. Surplus List.

Joseph Harris Co., Coldwater, N. Y. Seed catalogue.

Chase Nursery Co., Hunstville, Ala. Bulletin No. 1, Spring, 1911.

Vick & Hill, Rochester, N. Y. Special list for Spring, 1911.

Peter Henderson & Co., New York. Garden catalogue.

Correspondence

PEACH YELLOWS FROM PITS—AN EXPERIENCE

Editor NATIONAL NURSERYMAN.

Dear Sir:

Our former State Entomologist for Virginia, Mr. J. L. Phillips, has been under the impression that "Yellows" has been sent out from the nurseries. While he could not find any "Yellows" in our nurseries, or in the orchards in our section, he has stated that it must come from seed, and advised us not to get our seed from western North Carolina and east Tennessee, where the small or natural seed come from, but recommends our getting it from the inspected Georgia peach orchards.

In the summer of 1908 we got 25 bushels of seed from a Georgia orchard that was said to be inspected, and we bedded them on our grounds the same as we do our other seed. When planting in the spring of 1909, we planted one half of a field with kernels of the small seed, and then we planted all the kernels from the Georgia seed, and then planted the balance of the field with kernels of the small natural seed. We budded these 12 rows in the summer of 1909 with 12 varieties, one row of each variety; and when we dug this fall two-sevenths of all the trees in these rows were affected with a large gall or knot from the size of a walnut to that of an egg, while on either side of these 12 rows there was not a tree to be found with gall. The gall was formed at the ground or just under where the kernel started to grow, and our opinion is that fungus growth came with the seed, and also that it might be the cause of gall on apple coming from the seed. Now had we taken Mr. Phillips' advice and got all of our seed from that source, it would have been quite a heavy loss, two-sevenths of 300,000 peach trees.

In growing peach trees for the past 40 years I have seen three blocks that have had the same trouble, and thought it might be in the land. Would like to hear from others who have had any experience in that line.

W. T. Hood & Co.

Richmond, Va.

WISCONSIN SOCIETY OFFICERS

The newly elected officers of the Wisconsin State Horticultural Society are: President, D. E. Bingham, Sturgeon, Bay; vice-president, C. L. Richardson, Stanley; secretary, Frederic Cranefield, Madison; treasurer, L. G. Kellogg, Lake Geneva.

GEORGE C. ROEDING ON INSPECTION OF NURSERIES

An Appeal for Greater Uniformity in Inspection Laws

At a recent meeting of the horticultural commissioners and delegates of fruit growers' associations in California, Mr. George C. Roeding, the well known nurseryman of Fresno, entered a protest against the lack of uniformity in laws governing the inspection of nursery stock. Mr. Roeding entered a vigorous plea for greater latitude for the responsible nurseryman, and quoted Mr. E. W. Kirkpatrick of Texas on the same subject at the last meeting of the American Association of Nurserymen. This is very interesting, inasmuch as California has led the way in the past in making drastic laws governing shipments into California as well as shipments within the state. The indictment in Mr. Roeding's address, however, is particularly against the inter-county shipments. He speaks as follows:

"Your fourth question is as follows: If county boards of supervisors have authority to pass a horticultural quarantine law, can they pass a general ordinance declaring any or all nursery stock or grapevines brought into their county from any part of the world a nuisance, without any inspection of the stock?

"It is my opinion that ordinances so sweeping in their nature as you describe would be held by the courts to be unreasonable and void, as arbitrarily declaring that to be a nuisance which was not in fact a nuisance. To make an occupation indispensable to the health and comfort of civilized man, and the use of the property necessary to carry it on, a nuisance by a mere arbitrary declaration in a county ordinance and suppress it as such, is simply to confiscate the property and deprive its owner of it without due process of law."

I want to say further that the Hon. H. Z. Austin, superior judge of Fresno county, rendered a decision against the supervisors of Fresno county, in which the county was compelled to pay damages because a lot of grape cuttings, which were shipped from Contra Costa county to Fresno county, were destroyed by the horticultural commissioners, although the cuttings were not diseased. They claimed the right to do so under the ordinance which peremptorily prohibited the importation into Fresno county of grape vines or cuttings, north of a certain boundary line established by our supervisors.

COST OF AN APPLE ORCHARD

Question. How much will it cost to prepare, plant, and develop a twenty-acre grass field with apples and bring it to bearing?

Answers. S. T. Maynard.

First season—Plowing \$3 to \$5 per acre; harrowing \$2 to \$3; cover crops, \$19.50.

Second year—Cover crops and cultivation, \$15.

Succeeding years price not given.

Grant G. Hitchings. Would not plow but would plant in sod, and mulch with straw, using manure about the trees. Cost of planting five cents; cost of manuring, five cents; spraying two cents per tree each year for first five years; for second five, six cents per tree; pruning, thirty cents per acre per year for first five years; second five, one dollar per acre per year; mowing grass and mulching, sixty cents per acre per year; annual expense for first five years, \$1.90; for second five years, \$4.60; planting and mulching, \$5 per acre. Cost at end of ten years per acre: planting, \$2.00; mulching, \$2.50. Five years at \$1.90, \$9.50; five years at \$4.60, \$23.00; total, \$37.50.

C. J. Tyson: Cost of breaking land, trees, and planting same, \$25 per acre; expense of caring for same eight years, \$50 to \$100 per acre.—*Rural New Yorker*, Jan. 14, 1911.

WESTERN NEW YORK HORTICULTURISTS MEET

The fifty-sixth annual meeting of the Western New York Horticultural Society was held in Rochester, January 25 and 26, 1911. The meeting was largely attended, it being estimated that not less than 1500 people were in the convention hall at one time, either in the exhibition room, at the round table conferences, or in the main convention.

President W. C. Barry, of Ellwanger & Barry, presided. John Hall, for many years secretary of this society and last

year elected secretary of the American Association of Nurserymen, showed his usual efficient form in arranging an attractive program and pulling it off with great success. These officers were re-elected.

In President Barry's address, he emphasized the opportunities in fruit growing in New York, and called attention to the necessity, if fruit producers of the East are to hold their place and to enlarge their field in the markets of the East, of grading with greater consistency and packing with more attractiveness. Mr. Drew, manager of Conyer's farm, Greenwich, Conn., gave an interesting demonstration of the possibilities of renovating veteran apple orchards by severe heading back. The Society placed itself on record as favoring national legislation looking towards the standardization of grades and the improvement of apple packing methods.

NATIVE GROWN ENGLISH WALNUTS

In the *Florists' Exchange* for January 14, Mr. Joseph Meehan, writing about seedling English walnuts, says that the American-grown nut "would be far preferable to the foreign one for planting, because the seedling, like the parent, would likely prove hardier, and would have the benefit of being acclimated. English walnuts, if sown in the fall, frequently rot; but if mixed with somewhat damp sand and kept indoors during the winter in a cool place, there is a prospect that every one will make a satisfactory growth when sown outside in the spring. Walnut seedlings, especially those from imported nuts, are liable to lose their terminal buds, and therefore, need protection.

HANDSOME AND DELICIOUS SPECIMENS OF APPLES

The editorial office of THE NATIONAL NURSERYMAN has recently been the recipient of specimens illustrating the superlative in appearance and quality. These specimens came from Messrs. Stark Brothers Nurseries and Orchards Company, of Louisiana, Missouri. The appearance and beauty factors were illustrated by magnificent specimens of the variety known as Black Ben Davis. The richness of the coloring of these specimens in their blending of the creamy-yellow with the scarlet, crimson and purple, is quite indescribable. More than that, these specimens were good to eat!

The factor quality was illustrated in the highest degree by the specimens of Delicious. This fruit, as it is grown in the bearing orchards now established in the intermountain region and on the Pacific Coast, certainly exemplifies in proper manner the significance of the name. Advices from Chicago inform the trade that this variety sold as high as \$5.00 per dozen in recent weeks. Unquestionably, it was one of the high class varieties, and in the region of its adaptation is bound to increase in popularity.

WHEN FRUITS ARE INJURED BY THE COLD

In an illustrated article on the "Effect of Freezing on Buds, Bloom, and Fruit," in *Better Fruit*, Mr. O. B. Whipple of the Montana Agricultural Experiment College puts peach, apricot, cherry, and a large number of the plums in a class together, as being in danger from low temperatures from the very beginning of winter until the last spring frost has come and gone. However, apple, native plum, sour cherry, and pear buds are not often injured during the cold of winter, but, in common with practically all other fruit buds, are subject to injury in spring after they have swollen. With stone fruits, while it takes a severe winter to hurt the wood, the buds may be killed very much more easily.

The first group of fruits mentioned above will generally stand 10° below freezing early in the winter, but 5° more of cold will be liable to cause injury. Sour cherry and native plums have been known to stand 40° below freezing when perfectly dormant. If, upon splitting the bud during the dormant season, one finds the center to be brown, it is an indication that some of the flowers are killed.

Stone fruits are frequently injured just when the buds have opened enough to show the color of the petals. In this condition, peaches, for instance, can hardly escape injury if the thermometer drops to 21 or 22° F. If the pistil is found to be blackened, it is dead, and no fruit will form; for it is from the bottom of the pistil that the peach develops. It is the same with the cherry and the plum. The blooming period is a season of still greater danger, as with the temperature anywhere below 30° there is a risk, though even peaches, in rare cases, have withstood a temperature of 26°.

Apple and pear buds are not often injured until the individual flower buds can be seen. One of Mr. Whipple's photographs shows buds which were injured at 18°, just one bud having escaped; but that, with its two or three days of extra development, is liable to injury at 24°. Injury at this stage may be detected by pulling off the petals and

exposing the pistillate organs in the center. If these central organs are discolored, the flower is killed. The time just after the petals have fallen is perhaps the period when the buds are most tender of all in the development of the apple.

The Port Arthur Nursery Co. of Port Arthur, Texas, has sold out its business to Griffing Bros., Jacksonville, Fla.

A post card received from W. C. Reed and wife from Habana, Cuba, saying they are having a pleasant trip, having made a stay of eight days in Habana. They will leave for Tampa, Florida, to attend the Pomological meeting to be held February 9 to 11th.

COMMERCIAL RATING OF APPLES

At the meeting of the American Pomological Society in Tampa, Florida, February 9-11, Mr. J. L. Dumas of Walla Walla, Washington, will put forth his best efforts toward securing a higher commercial rating for Winesap, McIntosh Red, and Rome Beauty, which are grown successfully in the Northwest Pacific States.

A meeting was held in Horticultural Hall, Boston, last Tuesday, of the Board of Control, the Show Committee, and a number of the guarantors and representatives of the various societies interested in the great National Flower Show which will be held in Boston in March.

Delegates were present from the Society of American Florists, the American Rose, the American Carnation, Gladiolus, Sweet Pea and Massachusetts Horticultural Societies, the Florists' and Gardeners' Club and National Association of Gardeners, all of whom will hold their annual conventions during the progress of the Exhibition. This gathering represents the largest combination of the floral interests ever brought together on such a project, and gives positive assurance that the Exhibition itself will be the most stupendous affair ever held. The entire Mechanics Building has been engaged, and, as it contains over 100,000 square feet of exhibiting space, ample room seems assured; but so many applications for space are being received that there is little doubt that when the doors open Saturday, March 25th, it will all be filled. Many of the delegates from a distance who have never seen the building were loud in their praise of its desirability for such an affair. The large banquet halls, as well as the two consecutive halls which will permit of all business of the Societies being transacted under one roof, were especially interesting to the delegates. They were particularly well pleased with the brilliant prospects and the large number of firms who have already taken space, as reported by Chester I. Campbell, the business manager for the Show Committee. It is called a National Flower Show, but it is really International in scope, as exhibits will be sent from England, Holland, Denmark, Italy, South America, New Mexico, India, China, and Japan, and is creating a world wide interest. Among those who attended the meeting were: George Asmus, of Chicago, the new president of the S. A. F.; F. R. Pierson, Tarrytown, N. Y., chairman of the Board of Control; F. H. Tradendly, New York; Wm. J. Stewart, Boston; Henry Bunyard, New York; John K. L. M. Farquhar, Boston; W. F. Hastings, Buffalo, N. Y.; W. A. Manda, Wallace Pierson, Cromwell, Conn.; William Sim, Cliftondale; Thos. Roland, Nahant; W. H. Elliot, W. Allen Pierce, Waverly.

It was a most enthusiastic meeting, and the various societies are co-operating in a most hearty manner to make the affair a gigantic success from every point given.

The Quiz Column of THE NATIONAL NURSERYMAN is open to its subscribers who are invited to use it freely.

Doings of Societies

NEW YORK STATE FRUIT GROWERS AT ROCHESTER, JAN. 4, 5, and 6

The thought which comes to the minds of many fruit growers today, and which was voiced by several speakers at the tenth annual meeting of the New York State Fruit Growers' Association, is that the eastern apple grower, in order to withstand the competition of his brethren of the West, yearly becoming keener, so much so that some districts of the East sell western box apples in preference to the product of their own immediate neighborhood, must be willing to adopt some of the western methods.

Mr. Errett Wallace, of the College of Agriculture at Cornell, speaking on "Lime-Sulphur Injury," stated that a fine nozzle is the best kind to use, and that special care must be taken to have the spray evenly distributed, not allowing one part of the tree to become over-drenched, which may cause burning.

Mr. C. E. Bassett, the well known peach grower of southwestern Michigan, illustrated his talk on "Michigan Orchard Methods" by views of his own orchards, where every peach can be picked without the help of a ladder, and where the low trees greatly aid pruning and spraying operations.

An important address was that of Prof. C. S. Wilson of Cornell University on the use of the box package for apples. Professor Wilson strongly urged the use of boxes for varieties used chiefly for dessert purposes, while such varieties as Greening, used largely for cooking, could be packed in barrels; and he reminded the fruit growers that one of the chief ideas in box-packing is the grading of the fruit into different sizes, small, medium, and large, and packing each grade in a box by itself. It is interesting to recall that this topic was presented as a brand new subject at a meeting of this body six years ago by Professor Judson lately come from Idaho to Cornell. It is still of interest.

A new movement was inaugurated, the purpose of which is to establish an annual fruit show in Rochester. The prime object of this is to advertise the horticultural possibilities of the western part of the state, and to impress people, including would-be orchard owners, as well as the orchardists of today, with the fact that the lake region of the western part of the state is as well adapted for fruit growing as any part of the Union. It is to educate people in and to the use of apples and fruits generally, and in that way to enlarge the consumption of fruit and increase the markets generally. The whole exhibit will be promotional and educational. A considerable sum of money will be required, but the railroads have promised to help, and the city of Rochester is interested.

An important resolution, drawn up by a committee of which Mr. T. B. Wilson is chairman, was unanimously adopted, and "calls for legislation which shall standardize and make more uniform the grading and packing of fruits, particularly apples." The passing of this resolution is due largely to the dissatisfaction of eastern growers over the seeming favoritism towards western growers which exists in

WANTED Twelve to fifteen thousand one year Oriental Plane switches, March delivery. Sample and lowest cash price solicited for all or any part of order. Address A. R. BURT, Burton, La.

Nurseryman, Florist, German, 39 years, married, experienced in all kinds of Nursery and Greenhouse work, understands very well, propagating, budding, grafting, able to handle help, wants position on larger commercial place. Please state particulars and salary, first letter.

"Commercial," Care of National Nurseryman.

WANTED IN NEW ENGLAND

Reliable man as working foreman taking full charge of a fifty acre nursery growing mostly Privet, Asparagus Plants, Shrubbery, etc. Must be a good handler of men, sober and industrious. Chance for advancement. Reply stating age, experience, wages wanted and references to "New England."

Care of NATIONAL NURSERYMAN, Rochester, N. Y.

WANTED Working foreman on our nursery; also experienced budders and grafters to work by the year. Only steady and sober men wanted. State experience with references and what wages you would expect. Address,

W. T. HOOD & CO., Richmond, Va.

WANTED MARCH 1st, experienced nurseryman. Married man preferred. Steady work, good position for right man. Give particulars, salary wanted, full description and references in first letter.

PRINCETON NURSERY

Princeton, Ind.

FOR SALE

THE REED-BELL GRAFT WRAPPER

Address, HOMER L. REED
LOUISIANA, MO.

A wide awake practical HUSTLER of 25 years' experience, along all lines of Nursery work, will be at liberty March 1. Can assume charge or handle any proposition in the Nursery business with entire satisfaction or don't want the money. If your sales need increasing or your business is not coming up to expectations, write E. L. K., care of National Nurseryman.

WANTED--Manager

A man to meet customers by appointment, make estimates for their requirements and make out orders for foremen of large tree-moving department. Must be competent to meet owners of the largest country estates and hold their confidence by possessing business ability and accuracy. Will have secretary and assistant. Salary \$1800.

ISAAC HICKS & SON

Westbury Nurseries, WESTBURY, LONG ISLAND, N. Y.

WANTED Experienced man as assistant foreman. State age, experience and addresses of previous employers with wages expected. ROSEDALE NURSERIES, Tarrytown, N. Y.

present laws, and the great dissimilarity of method used in packing in the two sections of the country. Because western growers believe it desirable to use different sized boxes according to the size and shape of the fruit, and vigorously opposed the LaFean bill recently brought before Congress, which asked for one standard box, no such clause will be included here. State representatives at the meeting indorsed this resolution on the part of their organizations, and it is expected that little trouble will be met with in the state legislatures when the bill is presented.

Officers were elected as follows: President, Clark Allis, Medina; first vice-president, Samuel Fraser, Geneseo; second vice-president, Luther Collamer, Hilton; third vice-president, Prof. C. S. Wilson, Cornell University, Ithaca; fourth vice-president, C. H. McClew, Burt; secretary-treasurer, E. C. Gillett, Penn Yan.

MISSOURI STATE HORTICULTURAL SOCIETY

The fifty-third annual meeting of the Missouri State Horticultural Society was held at a very opportune time, during the Farmers' Week of the State Board of Horticulture, when, no doubt, many who had given little thought to the work of the Society became interested in it. There were three sessions a day for four days, the last of all being the sixth annual Agricultural College banquet. The following titles of papers will indicate something of the variety of subjects presented: "Preparing and Planting the Orchard," Prof. W. L. Howard, University of Missouri; "Poultry Husbandry," Prof. J. E. Rice, Cornell University; "Orchard Heating," W. A. Irvine, Springfield, Mo.; "Demonstration in Pruning Peach Trees," Prof. W. H. Chandler, University of Missouri; "The University and the Farmer," Dr. A. Ross Hill, President University of Missouri; "History, Aims, and Application of Co-operation in Fruit Growing and Marketing," Prof. W. H. Chandler, University of Missouri.

MASSACHUSETTS HORTICULTURAL SOCIETY

JACKSON DAWSON HONORED

This society reports an appropriation of \$5,500 to provide prizes and gratuities for the society's exhibitions in 1911. This announcement was made at the inaugural meeting early in January, when the George Robert White gold medal for the greatest advancement in horticulture was awarded to Jackson T. Dawson of the Arnold Arboretum. The newly elected president of the society, Mr. Charles Parker, was prevented by illness from attending the meeting. The treasurer's report showed a surplus of \$2,882 in the treasury, besides special funds and additional receipts of \$9,936. The late John Farlow provided a fund of \$2,882, the income of which the society is to use in promoting grape and pear culture. The proposed alteration of Horticultural Hall, the headquarters of the society, will not be undertaken at present.

AMERICAN POMOLOGICAL MEETING

A large number of orchardists and nurserymen will attend the thirty-second biennial meeting of this society in Tampa Fla., February 9-11.

Notice to the Trade

Our traveller, Mr. H. G. Benckhuysen will visit you shortly, otherwise kindly write to him. Care of MESSRS. MALTUS & WARE, 14 Stone St., New York City.

H. DEN OUDEN & SON

The Old Farm Nurseries

BOSKOOP, HOLLAND

Native Plants and Trees in Carload Lots

Rhododendron Maximum, Kalmia Latifolia (Mountain Laurel) Azalea Nudiflora, Hemlocks, Pines and Ferns, all sizes.

C. G. CURTIS, Grower and Collector

Callicoon, Sullivan Co., N. Y.

PEACH SEED

We now have in stock VIRGINIA NATURAL PEACH SEED crop 1910 can fill any size order.

VIRGINIA NATURAL PEACH SEED CO.,
4th Ave. & Clinton St., BALTIMORE, MD

PEACH SEED

Established 1859

We are offering Peach Seed, crop 1910—natural and other kinds—as low as the lowest. Let us know your wants and send for prices, samples and testimonials. We make a specialty of **Va. Natural Peach Seed.**

W. W. WITTMAN & CO., 117 Hanover St., BALTIMORE, MD.
Phone 4382 St. Paul

KANSAS CITY NURSERIES

GEO. H. JOHNSTON, Proprietor
(Successor to Blair & Kaufman)

Reliance Building, Kansas City, Mo.

Offer for **SPRING 1910** large stock of Carolina Poplars; Catalpa Seedlings; Cal Privet; Concord Grapes; Currants; Asparagus; and a full line of Ornamental Shrubs, Paeonies, etc

BERBERRY THUNBERGI, transplanted, 1 to 1 1-2 and 2 ft.
PHLOX, mixed colors, transplanted, cheap, Red, White, Blue, Pink.

CALIFORNIA PRIVET, strong 1 year, 2 to 2 1-2 feet.
LOMBARDY and CAROLINA POPLARS, fine, 8, 9, 10, 12 ft.

JOSIAH A. ROBERTS, Malvern, Pa.

SPECIOSA CATALPA

Transplanted and cut back

Extra well rooted, 12 to 18 and 18 to 24. Special prices
Good assortment of Apple in 11-16 grade.

GREENWOOD NURSERIES

Greenwood, Ind.

MOST EVERYONE HAS A HOBBY

Ours is propagating new varieties of Strawberries

After a thorough testing and found to be an all around, best of all, you hear us warble. Otherwise we bury them. Our catalogue for 1911 is brimful of new ones and conspicuously absent of varieties that have been, but can not come back. Early, mid-season and late varieties. We were the propagators and introducers of the famous "Stevens Late Champion." A book on Strawberry Culture mailed with every catalogue free for the asking.

J. G. GARRISON & SONS, Bridgeton, N. J.

Our Exchanges

COST OF HARVESTING AN APPLE CROP

E. H. Shepherd, a prominent fruit grower of Hood River Valley and the editor of the well known journal, *Better Fruit*, submits the following schedule of expenses as covering the cost of harvesting an apple crop. The items are based upon the western apple box, which is taken as the unit of measurement.

Packing	\$0.06
Hauling .....	.03
Box .....	.10
Paper .....	.05 1/2
Wiping and grading .....	.05
Nailing .....	.01
Orchard hauling .....	.01
Picking .....	.07
Help in packing house .....	.01
Box making .....	.01

To this might be added an approximate estimate of the cost of cultivating and pruning of about five cents per box, and the spraying will probably cost five cents per box per year, making the cost of production about fifty cents per box.

PROTEST ON CUSTOM LEVY ON DUTY ON EVERGREEN SEEDLINGS

Editor NATIONAL NURSERYMAN:

Sir: The Board of General Appraisers have handed down a decision in the matter of our protest. Our contention was that seedlings were seedlings, regardless of age, or size, or whether transplanted or not; and that the Ways and Means Committee very evidently intended that they should come in free of duty. These contentions have all been upheld by the Board of General Appraisers, and those who have filed protests against payment of 25% ad valorem on evergreen seedlings will have the amount collected refunded to them. A copy of the decision is enclosed for your information.

JACKSON & PERKINS COMPANY,
JOHN WATSON, Secretary.

In the matter of protest 420,864 etc., of Jackson & Perkins Co. against the assessment of duty by the collector of customs at the port of Rochester, N. Y.

BEFORE BOARD NO. 3

WAITE, General Appraiser: These protests relate to various kinds of plants, which were assessed under that part of paragraph 264, tariff act of 1909, which reads as follows:

264....stocks, cuttings and seedlings of all fruit and ornamental trees, deciduous and evergreen shrubs and vines, and all trees, shrubs, plants, and vines commonly known as nursery or greenhouse stock, not specially provided for in this section, twenty-five per centum ad valorem.

Protestants claim they should be free of duty under paragraph 668 as "evergreen seedlings."

Some testimony was taken in the case and the witnesses agree that the items involved are evergreens and were without question produced from seed, as distinguished from plants propagated by a cutting, budding or grafting. It would seem, as nearly as we can judge from invoice descriptions, that some of the items involved are transplanted goods; whether these should be considered evergreen seedlings does not clearly appear from the records. We are unable to determine, from the testimony of the two witnesses in the case, that any well-recognized trade meaning attaches to the term "evergreen seedlings." In fact, one of the witnesses states that some confusion exists in the trade as to the use of the term. It has been held that in order to give to an expression a special trade meaning

P. OUWERKERK,

No. 216 Jane St., Weehawken Heights, Hoboken, N. J.

Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our HOLLAND NURSERIES. Some of the goods on hand here during the packing season.

BOX STRAPS

WARD-DICKEY STEEL COMPANY

Manufacturers of Planished Sheet Steel
INDIANA HARBOR, IND.

GRAPE VINES

We offer for Fall and Spring delivery the largest and most complete stock of GRAPE VINES in strong grades for nurserymen and dealer's trade.

We also have an extra fine block of President Wilder currants which have made a strong growth.

SEND LIST OF YOUR WANTS FOR PRICES

T. S. HUBBARD COMPANY

Established 1866

FREDONIA, N. Y.

WE issue to members a Credit List with quarterly supplements. The list now contains between 7000 and 8000 names. Membership fee \$10.00, including privilege of obtaining unlimited number of ratings at cost. We also collect accounts at standard rates.

National Florists' Board of Trade, 56 Pine St., New York.

Peach Trees and Strawberry Plants

all leading market sorts for Fall 1910 and Spring 1911

MYERS & SON, Bridgeville, Del.

The Southwestern Nursery Co.

of OKEMAH, OKLAHOMA

will have for late Fall and early Spring an exceptionally fine lot of ONE YEAR APPLE, PEACH, PLUM and BUDDED ROSES;

TWO YEAR CALIFORNIA PRIVET, CAROLINA POPLARS, and CATALPA SPECIOSA.

WE INVITE YOUR INSPECTION.

EASTERLY NURSERY CO.

CLEVELAND, TENN.

OFFER FOR FALL 1911

One and two year Apple; One year and June Bud Peach; California Privet, in car-load lots. Also Magnolia, Grandiflora, Arbor-Vitea, Norway Spruce, Md. Plantier, and Baltimore Bell Roses. Ask for prices.

A BARGAIN IN STANDARD PEARS

Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere Address,

PIONEER NURSERIES COMPANY,
Salt Lake City, Utah.

different from its ordinary signification, it must appear that the commercial designation is the result of established usage in commerce and trade, and that such usage is "definite, uniform and general." *Madlock v. Magone* (152 U. S., 368). The record in the case at bar does not, in our opinion, justify a finding that a uniform and general trade usage exists as to the meaning of the term "evergreen seedlings."

In G. A. 5305 (T. D. 24305) this same question was before the Board, and upon a record which was there considered insufficient to establish a uniform and general commercial usage in the trade as to the meaning of the phrase in question, the conclusion was reached after a full consideration of the subject, that the term should be given the ordinary dictionary meaning, which is that of a plant grown from a seed as distinguished from one propagated by a cutting, budding, or grafting. The Board said:

In this view it would seem that Congress has used the word "seedlings" in paragraph 252 in the same sense in which it is defined by the lexicographers cited—that is to say, with reference to the method of germination or generation of the plant in the first instance and not with reference to whether or not it had been transplanted subsequently. In this view of the case, that which is a seedling will ever continue to be such, irrespective of the fact whether or not it has been transplanted, and it will be so distinguished throughout its entire life.

No appeal was taken from this decision. On the authority thereof, and in the absence of evidence before us to warrant a contrary conclusion, we sustain the protests in so far as the items enumerated therein are claimed to be free of duty under paragraph 668 as evergreen seedlings. The collector is instructed to reliquidate accordingly.

(Signed) BYRON S. WAITE,
EUGENE T. HAY. *Board of U. S. General Appraisers.*
H. M. SOMERVILLE,

MR. REED IN THE SOUTH

Mr. W. C. Reed, proprietor of the Vincennes Nurseries, Vincennes, Indiana, left January 10, with Mrs. Reed, to spend a month in the South, previous to attending the meeting of the American Pomological Society in Tampa, February 9, 10, and 11. Their first stop was at Ashville, N. C., thence they went to Jacksonville and St. Augustine on the way to Havana. After some days spent in Cuba, they visited Palm Beach and Miami in the time remaining before the Pomological sessions.

A NEW COMPANY

The North Dakota Nursery Co., of Flasher, N. D., under the management of Mr. M. J. George, a nurseryman of decided ability, has just started with the promise of a great future. They intend planting forest seedlings, currants, gooseberries and grapes this spring. They are also in the market for their entire spring delivery.

Trees for Sale

PLUMS, CHERRIES, PEARS, BUDDED QUINCE and
ANGERS QUINCE, 2 years old.

PATRICK O'HARA, Dansville, N. Y.

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Our **HEMLOCKS** and **DOUGLAS** are great. We offer a grand lot of Retinisporas, Spruces, Arbor Vitaes and Pines in various kinds and sizes.

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AMATEUR FRUIT GROWING by Samuel B. Green, a practical guide to the growing of fruit for home use and the market, written with special reference to a cold climate. Illustrated. 134 pp., Price, 12 mo., cloth. \$0.50; paper 25 cents.

VEGETABLE GARDENING, by Samuel B. Green. 10th edition. A manual on the growing of vegetables for home use and the market, profusely illustrated. 252 pp., Price, 12 mo. cloth, \$1.00; paper, 50 cents.

GRASSES AND HOW TO GROW THEM, by Thomas Shaw, covering name and character of all the principal grasses in America: temporary and permanent pastures; methods in making hay, etc. Illustrated, 453 pp., Price, 12 mo. cloth, \$1.50.

WEEDS AND HOW TO ERADICATE THEM, by Thomas Shaw, giving the names of the most troublesome weed pests east and west and successful methods of destroying them. Price, 16 mo. cloth, 210 pp., 50 cents; paper, 25 cents.

FARM WIND-BREAKS AND SHELTER BELTS by Samuel B. Green. A manual of tree planting for wind-breaks and shelter with description of the most suitable trees hardy enough to stand Northwestern conditions. Practical cultural directions from seed to maturity. Illustrated. 69 pp., Price, paper. 25 cents.

ELEMENTS OF AGRICULTURE, by J. H. Sheppard and J. C. McDowell, a complete treatise on practical agriculture covering plant and animal breeding thoroughly illustrated. A complete text book adopted in public and agricultural schools throughout the Northwest. 12 mo. cloth, 100 pp., Price, \$1.00

POULTRY MANUAL, by Franklane L. Sewell and Ida E. Tilson. A safe guide to successful poultry culture in all its branches, fancy and practical; breeding and feeding; diseases and remedies; how to make farm poultry pay, etc., etc. 12 mo. 148 pp., Price 50 cents; paper, 25 cts. (40th thousand).

POULTRY HOUSES, COOPS AND EQUIPMENTS, by H. A. Nourse, (editor of the Poultry Herald). A book of newest plans for building practical up-to-date poultry houses, with description of coops, fixtures and poultry utensils for the farm or village poultry keeper. Profusely illustrated. 100 pp., Price, paper 25 cents.

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WE GROW

FRUIT TREE STOCKS—All Sizes.
300 varieties of Conifers, 1 to 4 years old.
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1600 varieties of New and Old Ornamental Trees & Shrubs in all Sizes.
250 varieties of Climbing Plants.
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We Have No Agents.
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500,000 Cuthbert	200,000 Gregg
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Other varieties in smaller quantities. Also millions of strawberry plants of all leading varieties. Write us today and let us give you estimates.

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CALIFORNIA PRIVET

5,000 2-year, 4 to 5 ft.	50,000 1-year, 30 to 40 inches
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10,000 2-year, 4 to 5 ft.	25,000 1-year, 2 to 3 ft.
20,000 2-year, 3 to 4 ft.	15,000 1-year, 18 to 24 inches.

Sugar, Silver, Norway and Ash-leaved Maples; Elms, 8 to 10 ft.; Texas Umbrella, strong whips, 4 to 6 ft.; Hydrangea P. G., bush and tree forms; Crimson Rambler Roses, 3-year; Magnolia Grandiflora, 2 to 6 ft. Special prices on car lots.

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5000 Norway Spruce, 2 to 3 feet, and 3 to 4 feet.

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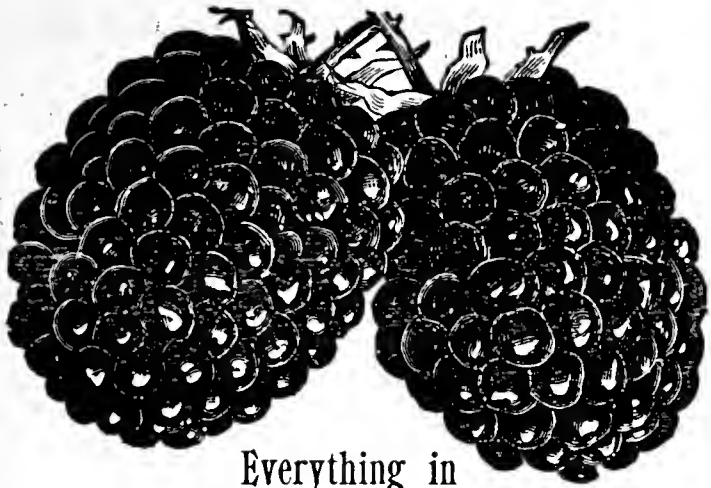
Partial View of Persimmon Trees in Nursery, shown in our Retail Catalogue, page 23.

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Everything in
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Complete line of high-grade Ornamental Trees, Shrubs, Evergreens, Herbaceous Plants and Bulbs. SPECIALTIES: Acer, Aesculus, Ampelopsis, Andromeda, Aristolochia, Azalea, Betula, Buxus, Clematis, Daphne, Dielytra, Fagus, Funkia, Hydrangea, Kalmia, Magnolia, Paeonia, Phlox, Quercus, Rhododendron, Roses, Salix, Tilia, Ulmus, Conifers.

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Write us for estimates of total cost and full information about importing.



Small Fruit Plants for the Nursery Trade, Spring 1911

Black and Purple Raspberry Tips, Red Raspberry, Blackberry, Dewberry, Strawberry, Gooseberry Layer Plants, 1 and 2 years Layered, Orange Quince, Gooseberry and Currant Cuttings, Asparagus, 1 and 2 year old, Horseradish, Rhubarb 1 and 2 year old Roots, also divided Roots. Write for prices.

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TWO-YEAR OLD CAROLINA POPLARS,
4 feet and up. Also Cuttings by the 1000 or 10,000. Send for price. W. C. BRYANT, Nurseryman, Dansville, N. Y.

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40,000 2-yr. Apple for Early Spring Delivery

Nice, clean and smooth stock

Heavy on Yellow Transparent, Early Harvest, Red June, Red Astrachan, N. W. Greening, Stark, York Imperial, Smith's Cider, Winesap, Ben Davis, Arkansas Black, Magnum Bonum, Reagan's Red and Mo. Pippin.

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Strong Two-year old Roses in Pots, new and standard varieties. A large stock of Hybrid Teas, the most select and complete list offered to the American trade

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Give us a trial order, send in your list now for quotations

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Extra fine stocks of Scarlet, Pin, Black, Red and Mossy Cup Oaks, Pecan, Hickory, Black Walnut, Butternut, English Walnut, Ash Leaved and Silver Maples; Dogwood, Ampelopsis, etc.

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∴ FLOWERING SHRUBS ∴
APPLE AND PEAR SEEDLING
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Light Grade Apple Whips Best Commercial Sorts

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Prices and Quality Right

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We wish to Call Attention to Our Offerings of

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PLUM—De Soto, Wyant and Japanese varieties.

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CARROLLTON, ILL.

ROSES

in 2½ and 4-inch pots, on own roots, summer grown, winter rested.

Finest selection, old and new, 200 varieties

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Plants and Cuttings by the Million. Write us for prices.

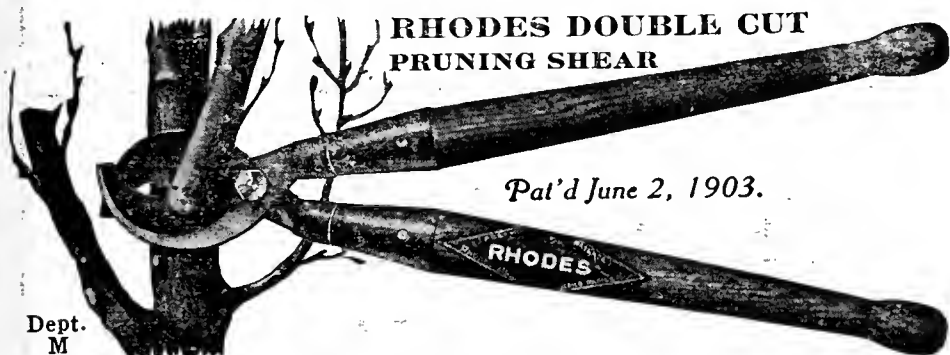
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SALES ON APPLICATION.

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RHODES MANUFACTURING CO., Grand Rapids, Mich.

The only pruner made that cuts from both sides of the limb and does not bruise the bark. Made in all styles and sizes. We pay express charges on all orders. Write for circular and prices.

Rhododendrons, Hardy Hybrids, named in the best modern American varieties, *Andromeda florabunda*, *Ericas*, *Azaleas*, *Kalmia latifolia*, and other American plants.

Pinus Cembra, *Retinosporas* in variety, *Box* in variety, *Golden Privet*, *Copper Beach*, and other ornamental Trees and Shrubs.

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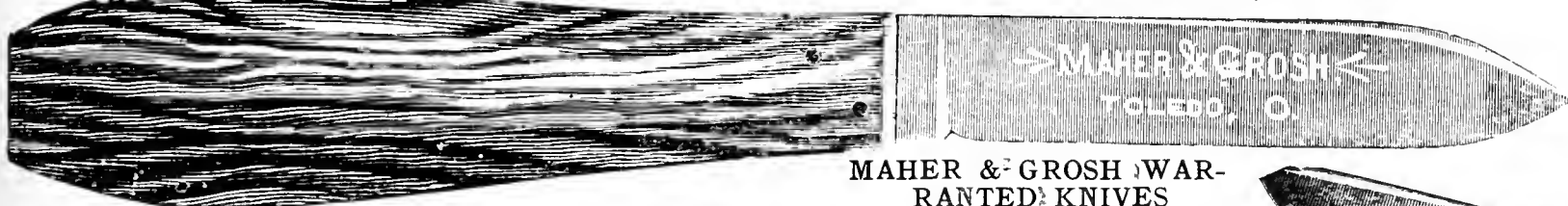
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GRAFTING KNIFE No. 2, \$1.80 doz. Postpaid.



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White Handle

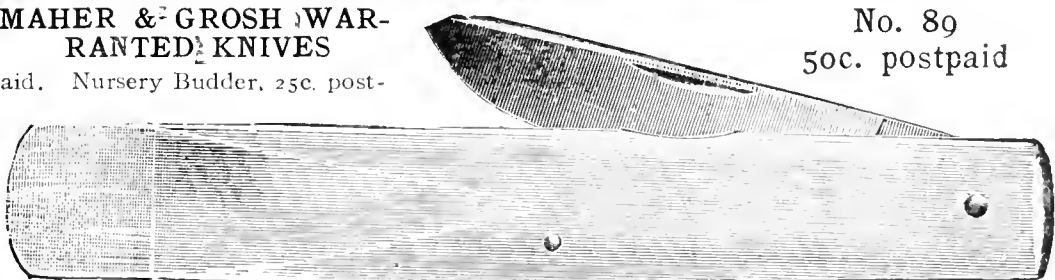
No. 89
50c. postpaid

Pocket Grafting Knives, 30, 40 and 50c. each. Nursery Pruner, 50c. postpaid. Nursery Budder, 25c. postpaid. Pocket Budder, 35c. postpaid.

The FLORIST KNIFE—No. 89, as shown, 50c.; 6 for \$2.50. No. 89½ has grafting point blade, same price. These blades are equal to any razor in fineness.

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Give dollars worth of protection at a fraction of a cent cost. Don't take a chance with your young trees. One rabbit will kill many in a single night. Protect yours with Hawkeye, the protector that rabbits, mice and other tree gnawers can't gnaw through—the protector that protects against cut worms and prevents trees becoming skinned or bruised by cultivator or lawn mower.

Hawkeye tree protectors are elm veneer chemically treated. They are easily applied to the trees and will last until the tree is beyond the need of protection.

The value of one tree is more than all the Hawkeye tree protectors you need will cost you. Send us your order before some of your trees are killed—You will regret it if you wait until too late.

Write for prices today

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120 Main Street, Burlington, Iowa

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BLACKBERRY ROOT CUTTINGS, Raspberry, Blackberry and Strawberry Plants and Fruit Trees at Half Price.

WANTED—Whole root grafts of Apple and Pear.

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SURPLUS At prices that will move this stock quick

150,000 Black Locust and Catalpa Speciosa seedlings, all grades.
100,000 California Privets, 1 and 2 year, all grades and fine plants.
100,000 Asparagus, 2 year Plants Asst.
60,000 Peach trees, Good Asst.

Write at once, naming number, grades and kinds wanted for prices.

THE WESTMINSTER NURSERY, Westminster, Md.

WANTED—A working foreman.

Waxahachie Nursery Co.

J. R. MAYHEW, President

Surplus January 1st in

CHERRY, 1 and 2 year, all grades

APRICOTS, 5/8 to 3/4, and 3/4 inch up.

PEACH, 1/2 and 2/3 feet.

CALIFORNIA PRIVET, EVERGREENS, ROSES, SHADE TREES, Etc.

SPECIAL QUOTATIONS on car load cherry.

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Berberry Thunbergii Seedlings

"Makes the finest of all hedge plants"

LARGE STOCK OF ALL GRADES FOR IMMEDIATE SHIPMENT

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Concolor	White Pine
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CHARLES CITY, IOWA

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Our annual plantings of Grape Vines
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Largest in the World!

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Our continual increase of nursery trade for
more than thirty years seems to be the re-
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is the name of the men who
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CHERRY

that can be produced by suitable soil,
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Take a look at the stock or ask for a
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$\frac{3}{4}$ to 1 inch—5 to 6 feet

$\frac{5}{8}$ to $\frac{3}{4}$ " —4 to 5 "

$\frac{1}{2}$ to $\frac{5}{8}$ " —3 to 4 "

7-16 to $\frac{1}{2}$ " —2 $\frac{1}{2}$ to 3 "

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any time---sure to please you**

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Vines, and Conifers for Nursery Planting.

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Offer for Fall 1910 and Spring 1911

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NATURAL PEACH PITS—crops 1909 and 1910.

100,000 PEACH SEEDLINGS from buds for lining out

General line of Nursery Stock Send us your want list

Budded Pecan Trees

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Are Leaders to the Trade this Year.

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A general assortment of Fruit Tree Stocks, such as Apple, Pear, Myroblan Plum, Mahaleb and Mazzard Cherry, Angers Quince etc. Forest Trees, Ornamentals, Evergreen Seedlings, Roses, etc. The largest stock in the country. Prices very low. The very best grading and packing. Send for quotations before placing your orders elsewhere. Catalogue free.

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HIGH GRADE FRUIT AND ORNAMENTAL
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This book is designed to serve as a substantial reference book and is the result of special experience in the study of the practical aspects of plant pathology. There is a comprehensive discussion of the chief fungous diseases of cultivated and familiar plants.

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8 vo. 508 pages, Illustrated.

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218 Livingston Bldg., Rochester, N. Y.

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LARGE STOCK, BOTH SEEDLINGS AND TRANS-PLANTS, OF

SPRUCE
PINES
FIRS
CEDARS

ARBOR VITAE
HEMLOCKS
JUNIPERS
YEWS

FOREST TREE SEEDLINGS

IMMENSE STOCK OF SEEDLINGS AS FOLLOWS:

CATALPA SPECIOSA
BLACK LOCUST
MAPLES
OAKS
LINDENS
BEECH
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ASH
WALNUT
ELM
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BIRCH
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WILD BLACK CHERRY

*Advance Price List of Evergreen and Forest Tree Seedlings
now Ready*

D. HILL

EVERGREEN SPECIALIST

DUNDEE, ILLINOIS

Save Your \$ \$ \$

Buy your **Cherry** of a Cherry grower.

We can **save** you the **middle man's profit** and **deliver** you trees equal to the **best**. All grades in **car lots** or less. Our **Cherry** are **fine**.

We will also have our usual assortment of Fruits both large and small.

**Shades, Shrubs, Perennials
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Want Lists will receive immediate attention

C. M. Hobbs & Sons

BRIDGEPORT, IND.

William Street Nurseries

We have a large surplus of the following stock:

**CHERRY, PLUM, PEAR and QUINCE—
2 year, all grades.**

**MAPLE—Norway, Silver, Weirs Ct. Leaf
CUT LEAF BIRCH**

HYDRANGEA—Bush and Tree

H. P. ROSES and CLIMBERS

**CLEMATIS—Large Flowering and Panic-
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CALIFORNIA PRIVET

A GENERAL LINE OF SHRUBS

Dealer's lists especially solicited for quotation.
All stock in storage ready for early Spring Shipment.

RICE BROTHERS CO.

GENEVA, N. Y.

EVERY NURSEYMAN

HAS A CALL FOR

Hardy and Tender Plants,

Lilies, Dahlias, Gladioli, Tuberoses, Geraniums, Salvias, Asters, Petunias, Insecticides and Fertilizers, Spraying Machines.

Flower and Vegetable Seeds

Farm Seeds, Oats, Corn, Potatoes, Clover, Timothy, Wheat, Lawn Grass, Blue Grass, White Clover.

Send us a list of your wants and let us quote prices. Will be glad to send a wholesale catalogue to every nurseryman and dealer.

James Vick's Sons
ROCHESTER, N. Y.

Quick Budding and Stiff Stems

Get into the market with better blooms—Sheep's Head Brand of Pulverized Sheep Manure will prove a money maker for you. Unsurpassed as an extra stimulant to plants, pots or beds. Will not cause black spot like stable manure. Free from weedseeds—always ready.

Carnations, roses, chrysanthemums and violets are particularly benefited. Send for booklet, "Fertile Facts." It shows you the dollars and cents view and points out the actual profits from using Sheep's Head Brand, and shows you how to prepare soils so that they will retain soluble plant foods near the surface of the ground within reach of the rootlets of growing vegetation. We will send you a copy of this interesting and instructive book free.

Write to-day.

NATURAL GUANO CO.
Dept. 23 Aurora, Ill.



PENNSYLVANIA NURSERY CO.

Girard, Erie Co., Pa.

GROWERS OF A COMPLETE GENERAL LINE.

SPECIALTIES: Peach, Cherry, Plum, Currants, Grapes, Hedging, Ornamentals, Shrubs—some extra large. Plum Farmer Raspberry. Send us your want and surplus lists.

80,000 PEACH TREES For Fall Delivery

Also full line of nursery stock, including Red Oak, Berberis, Thunbergi, White, Austrian and Scotch Pine, Norway Spruce, Grapes, Currants, etc.

M. T. TWOMEY, - Franklin, Mass.

THE NEW BERRY GIANT HIMALAYA

A DISTINCT new fruit. Plant resembles Blackberries, but canes do not die. Old wood bears every year—sprouts all come from one root. Grows forty feet in a year, two feet some weeks. Lives as long as an apple tree. Berries jet black, an inch long, thick, meaty, melting, sweet, with little core, and unusually rich. Borne in immense clusters on the outside of short fruit branches. Perfectly adapted for any use—fresh or in winter. Can be shipped any distance. Last year we began to pick August 15th, and continued until October. Our yield was at the rate of ten hundred and forty-two crates, of sixteen quarts each, to the acre (a thousand plants). An acre of twenty-two-months-old plants will yield fifteen hundred to two thousand pounds of fruit. The next year it will bear five to ten tons. The Berries sell readily at sixteen cents a quart.

OUR FREE BOOK TELLS ABOUT MONEY-MAKING NEW BERRIES

Get our fine Berry Catalogue. It fully describes and illustrates Himalaya. We are Berry specialists; go all over the world for new standard Berries. Our catalogue describes King Edward Strawberry, Berrydale Raspberry and two each of splendid new Currants and Gooseberries. This book will prove to you that Berry Growing yields more net profit from equal acreage, with no more work, than any other fruit. We get more from one acre of Berries than from three acres in any other crop. Tree fruits require eight years before full crops—Berries two years. Market demand for Berries has never been met. Think about these things—and get our catalogue.

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California Privet PLANTS AND CUTTINGS BY THE MILLION

Write us for Prices

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HUNTSVILLE, ALA.

THE CURETON NURSERIES

We offer Terry's Winter, Stayman's Winesap, Mangum Bonum, Pen Davis, Yates, Ark. Black, Kinnards Choice, M. B. Twig and Poorhouse Apple trees, 2-3 ft., 3-4 ft., 4-5 ft., 5-6 ft. 1 yr. Elberta, Hiley, Gov. Hogg, Carman peach trees 1 1/2-2 ft., 2-3 ft., 3-4 ft. Umbrella China, 5-6 ft. Tree Althea, 4-5 ft. Oriental Plane, 8-10 ft. Magnolia Grandiflora 1 1/2-2 ft., 2-3 ft., 3-4 ft. Carolina Poplar, 6-8 ft. (branched), 8-10 ft. Amoor River Privet and Carolina Poplar Cuttings; Roses (bush); Roses (climbing); Yellow Jasmine vines; Cape Jasmine, 5-6 ft.; Chinese and Arborvitae; Spruce, 4 yrs. WANTED—Apple Seedlings and Scions. Write today and send us your orders. Perfect satisfaction guaranteed. No disease in our stock.

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Grape Vines

LET US QUOTE YOU ON YOUR WANTS

We have **CONCORDS** to offer at a specially low figure.

Graded full stronger than is customary in the trade

MINER & MINER
SHERIDAN, N. Y.

SPRAYING DOES PAY

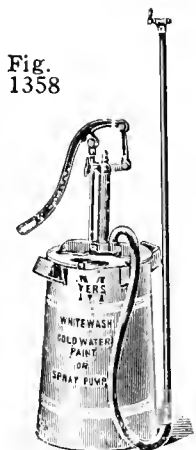
and it is a necessity to insure good crops. The up-to-date fruit-grower has no more expectation of getting a good crop of fruit from unsprayed trees than a good farmer has of getting a good crop of wheat from unplowed ground.

MYERS SPRAY PUMPS

are in use in every important fruit growing district on the globe. They are giving complete satisfaction to thousands of successful fruit-men. They are doing this because they are made on honor. Forty years in the business of manufacturing of pumps makes it possible for us to build a pump that will stand the wear and tear of hard, thorough spraying.

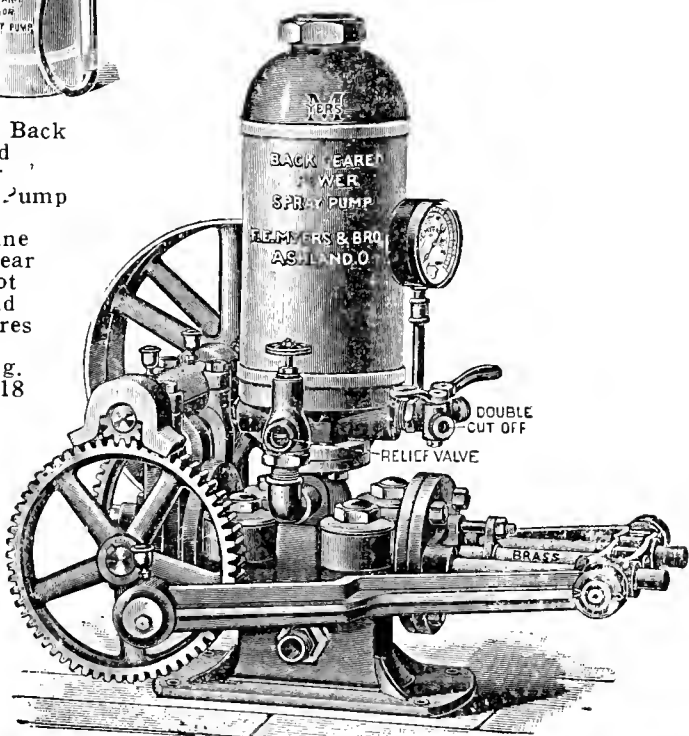
The keen, hard-headed, wide-awake orchardist knows that the value of a spraying machine depends on the good, honest, workmanship and the right kind of materials. He knows too, that a spraying machine made for high pressure work in the orchard will not answer for the garden patch, the vineyard or the potato field.

Myers pumps are built for every sort of purpose, from the little bucket spray pump to the powerful, high-pressure pumps run by gasoline engines.



Myers Back Geared Power Spray Pump With Machine Cut Gear for Hot or Cold Mixtures

Fig. 1318



Spray Nozzles, Hose, Fittings, Etc.

A hardware man or implement dealer in your own town possibly carries Myers pumps in his stock, but in case he does not, and cannot furnish you with the prices and information, write us for a copy of our fine new spray pump catalogue.

IT IS FREE

F. E. MYERS & BROTHER

Ashland Pump & Hay Tools Works

190 Orange St., ASHLAND, OHIO

"IT PAYS THE MAN
THAT SPRAYS"

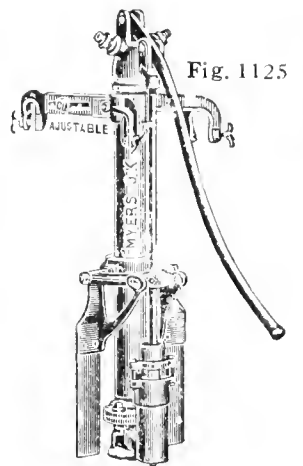


Fig. 1125

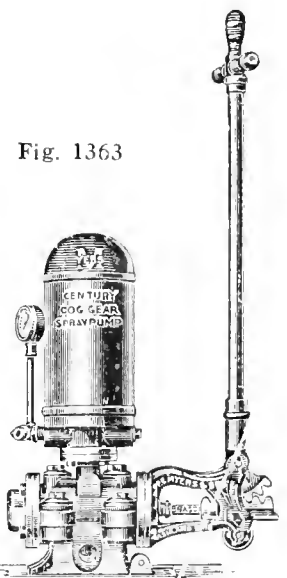


Fig. 1363

A NEW PLUM FROM LUTHER BURBANK "DUARTE"

The best Blood Plum yet produced. Write for circular
PIONEER NURSERY CO., Monrovia, Cal.



WHITE'S BUDDING TOOL

For budding pecans, hickories, walnuts, chestnuts, etc., by the annular, semi-annular or patch methods

Write for description

HERBERT C. WHITE,

DeWitt, Ga.

Black Locust Seedlings

ALL GRADES LARGE SUPPLY
PRICES RIGHT

SOME APPLE SCIONS STILL UNSOLD

The Cunningham Nursery Co.

RISEING SUN, IND.

You're Going to Sell a Lot of Strawberry Plants this Year, Aren't You?

Let us know your wants at once--our prices will interest you.

We grow them by the million--have more than a hundred varieties. We devote one whole farm, where we have found the soil to be "just right," to growing strawberry plants, and those we supply cannot be excelled either for quality of plant nor grade of berry produced. We pack in special cases so that plants cannot suffer by long-distance shipping; will take good care of orders large or small.

DECIDUOUS ORNAMENTALS

STRAWBERRY

We Have Over Ten Million Plants

120,000	Aroma	120,000	Lady Thompson
30,000	Auto	23,000	Mark Hanna
52,000	Bederwood	120,000	Mascot
10,000	Bismarek	125,000	Millionaire
52,000	Brandywine	186,000	Michel's Early
834,000	Bubach	42,000	New York
27,000	Chipman	54,000	New Home
310,000	Crescent	79,000	Niek Ohmer
440,000	Duncan	30,000	Norwood
138,000	Ea. Hathaway	72,000	Oak's Early
54,000	Ekey	88,000	Oswego
68,000	Excelsior	220,000	Sample
45,000	Fairdale Giant	118,000	Sen. Dunlap
200,000	Fendall	240,000	Sharpless
2,456,000	Gandy	120,000	Star
188,000	Glen Mary	20,000	Stephens' L. C.
400,000	Haverland	75,000	Superior
30,000	Johnson's Ea.	248,000	Tennessee
2,280,000	Klondike	330,000	Warfield

CALIFORNIA PRIVET

1000, 7 to 8 ft.	50000, 2 to 3 ft.
2000, 6 to 7 ft.	50000, 18 to 24 in.
10000, 5 to 6 ft.	50000, 12 to 18 in.
20000, 4 to 5 ft.	10000, 6 to 12 in.
50000, 3 to 4 ft.	

SURPLUS LIST OF PEACH, JAN. 20th, 1911

	1-in. 6-8	$\frac{3}{4}$ -1-in. 6-7	$\frac{5}{8}$ - $\frac{3}{4}$ 5-6	$\frac{1}{2}$ - $\frac{5}{8}$ 4-5	$\frac{3}{8}$ - $\frac{1}{2}$ 3-4	2-3 ft.	1-2
Beauty		100	150	100	110	60	70
Alexander		130	130	50	20		
Amstden June	200	200	200	200	200		
Allbright's October		90	140	90	120	50	60
Atlanta	200	200	200	200			
Smock	150	500	2000	2000	6000	3000	6000
Bilyeu	100	100					
Burke Cling		100	220	130	160	120	110
Brandywine	50	200	200	200	200	200	
Bray's Rare Ripe	100	940	900				
Chair's Choice	350	350	1000	1000	500	500	200
Cornelia		210	210	110	180	70	60
Champion	1000	2000	2000	2000			
Chinese Cling	150	150	150	150	150	150	150
Cobler	50	100	100	100	100	100	
Connett's So	500	1000	1000	1000	1000	1000	500
Crawford's Late	100	1000	500	500	500	500	500
Crawford's Early	100	100					
Crosby	1000	1000					
Denton		300					
Easton Cling		100	220	160	130	90	30
Early Michigan	100	200	150	100	100		
Early Rivers	100	100	100				
Edgmont By.	100	400	700	100			
Elberta	9000	9000	24000	29000	22000	18000	5000
Engles' M	100	100					
Eureka	200	300	500	400	100		
Fitzgerald	100	100					
Ford's Late	200	200					
Foster	100	100					
Geary's Hold-On	500	500	1000	1000	1000		
Gold Drop	300	300					
Greensboro	2000	2000	5000	3000	2000	500	
Heiley's	200	500	1000				
Krummell's	500	500	500				
Levy's Late	500	500	500	500	500	500	
Lyndon Cling		150	190	90	90	70	30
Lodge	250	250	250				
Lorentz	300	300	300	300	300		
Mamie Ross	500	500	500	500			
Marshall	100	100	100	100	100	100	
Matthew's Beauty	200	200	200				
Mayflower	500	500	500	500			
McCollister	500	500	500	500	500	500	
Moore's Favorite	2000	2000	5000	5000	1000	1500	
Mt. Rose	500	500	3600	1600	1400	2500	2700
Newington Cling	200	200	50	50	50	50	50
Niagara	500	500					
Olden		100	210	110	120	70	40
Olden vonFree	2000	3000	3000	3000	2000	1000	1000
Olden von Cling		10	150	80	60	30	10
Piequit Late	300	360	300	200	200	200	100
Preston Cling		180	210	80	60	40	20

American Elm--

50, 8 to 10 ft. high, 1 ¼ in. diameter.
1000, 6 to 7 ft. high, 1 in. diameter.

American Linden—

50, 8 to 10 ft. high, 1 1/4 in. diameter
50, 6 to 7 ft. high, 1 in. diameter.

Barberry Thunbergii— Baby Rambler Rose—

2000, 18 to 24 in.
5000, 12 to 18 in.

Box Elder—

1700, 8 to 10 ft. high, 1 1/4 in. diameter.
1000, 6 to 7 ft. high, 1 in. diameter.

Catalpa—

500, 8 to 10 ft. high, 1 1/4 in. diameter.
500, 6 to 7 ft. high, 1 in. diameter.

Norway Maple—

200, 12 ft. high, 2 in. diameter.
2000, 10 ft. high, 1 1/2 in. diameter.
3000, 8 to 10 ft. high, 1 1/4 in. diameter.
5000, 6 to 7 ft. high, 1 in. diameter.

Russian Mulberry—

500, 8 to 10 ft. high, 1 1/4 in. diameter.
1000, 6 to 7 ft. high, 1 in. diameter.

Silver Maple—

500, 12 ft. high, 2 in. diameter.
5000, 10 ft. high, 1½ in. diameter.
3000, 8 to 10 ft. high, 1¼ in. diameter.
5000, 6 to 7 ft. high, 1 in. diameter.

EVERGREENS (burlapped)

American Arborvitae—	Koster's Blue Spruce—
100, 5 to 6 ft.	24 to 30 in.
300, 4 to 5 ft.	1000, 18 to 24 in.
300, 3 to 4 ft.	1000, 12 to 15 in.
1000, 2 to 3 ft.	Norway Spruce—
1000, 18 to 24 in.	100, 5 to 6 ft.
2000, 12 to 18 in.	3000, 4 to 5 ft.
Azaleas, Assorted	4000, 3 to 4 ft.
Blue Cedar—	5000, 2 to 3 ft.
500, 18 to 24 in.	1000, 18 to 24 in.
500, 24 to 30 in.	5000, 12 to 18 in.
Colorado Blue Spruce—	Pyramidal Arborvitae—
50, 3 ft.	1000, 2 to 3 ft.
100, 2 ft.	1000, 18 to 24 in.
1000, 1 ft.	1000, 12 to 18 in.
Hemlock Spruce—	Rhododendrons—
100, 5 to 6 ft.	Assorted.
100, 4 to 5 ft.	
100, 3 to 4 ft.	

Prize	1000	1000	500				
Ray	3000	4000	5000	2000	2000	2000	2000
Reeve's Favorite	3000	3000	3000	3000	3000	1000	1000
Salway	3000	4000	5000	2000	2000	2000	2000
Slapppy	2000	2000	2000	2000	1000	1000	1000
Stonewall Jackson		150	150	120	80	50	30
Sneed	400	400	300				
Stimson, October		160	190	110	100	40	30
Stephen's Rare Ripe	500	500					
Stump	3000	3000	2000	500	500		
Sunrise Cling	300	300	300	200	100	100	100
Triumph	600	600	600	400	200		
Waddell	2000	2000	1000				
Wheatland	100	100	100	40			
W. H. Cling	300	300	300	300	300	300	300
Wilkins' Cling	200	200	200	200	200	200	200
Wonderful	2000	3000	5000	4000	3000	2000	1000
Walker's Free	300	300	300	300	100	100	100
Belle of Georgia	1000	4000	9000	9000	9000	2000	500

SURPLUS PLUMS

	1-in. 6-8	$\frac{3}{4}$ -1 in. 6-7	$\frac{5}{8}$ - $\frac{3}{4}$ 5-6	$\frac{1}{2}$ - $\frac{5}{8}$ 4-5	$\frac{3}{8}$ - $\frac{1}{2}$ 3-4
Wickson	1000	3000	500		
Red June		2000	1000	1000	2000
Burbank	500	1500	1000	1000	
Abundance		1500	1000	1000	2000

SURPLUS CHERRY

	1-in.	$\frac{3}{4}$	$\frac{5}{8}$	$\frac{1}{2}$	$\frac{3}{8}$
	5-6	4-6	4-5	3-4	2-3
Baldwin.....	200	200	200	200	200
Early Richmond	2000	6000	9000	7000	5000
Montmorency	1000	5000	8000	6000	4000

STANDARD PEAR TWO YEAR

	1 in. 6-8	$\frac{3}{4}$ -1 in. 6-7	$\frac{5}{8}$ - $\frac{3}{4}$ 5-6	$\frac{1}{2}$ - $\frac{5}{8}$ 4-5	$\frac{3}{8}$ - $\frac{1}{2}$ 3-4
Bartlett			5000	10000	10000
Flemish Beauty				1500	1500
Garber		1000	1000	1000	1000
Keiffer	2000		3000	3000	1000
Keiffer (one year)			9000	9000	9000
Bartlett (Dwarf)			2000	2000	200

GRAPE TWO YEAR TRANSPLANTED

60,000 Concord
20,000 Moore's Early

ASPARAGUS TWO YEAR

50,000 Palmetto
50,000 Barr's
50,000 Conover's
50,000 Donald's Elmira
50,000 Giant Argenteuil

Harrison's Nurseries
J.G. HARRISON & SONS
BERLIN PROPRIETORS
MARYLAND

Designed and written by The McFarland Publicity Service, Harrisburg, Pa.

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THE NATIONAL NURSERYMAN



MARCH, 1911

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

The Monroe Nursery

Established 1847.

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Choice Nursery Stock

PEACH, STD. PEAR,
PLUM, CHERRY, Etc.

I. E. Ilgenfritz' Sons Co.

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Mount Arbor Nurseries

E. S. WELCH, Proprietor

Shenandoah, Iowa

Make a Specialty of a Full Line of
General Nursery Stock for the
Wholesale Trade

WE HAVE A SURPLUS OF

APPLE—some varieties.

CHERRY—sour and sweet varieties.

EUROPEAN PLUM

CONCORD GRAPE. CURRANTS

AMERICAN ELM SEEDLINGS

HYBRID PERPETUAL ROSES

CALIFORNIA PRIVET

Will be pleased to name prices on your wants.

ASK FOR TRADE LIST AND BULLETINS

EVERGREENS

OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI

by the thousand.

Andorra Nurseries,

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C R A B S

50,000 11/16 and up, 5 to 6 feet

45,000 9/16-11/16, 4 to 5 feet

20,000 3 to 4 feet branched

Alaska, Beeches' Sweet, Darth Early Strawberry, Excelsior,
Faribault, Florence, Hiller, Hyslop, Lyman's Pro. Minnesota,
Orange Pickers, Quaker B, Siberian, Sweet Russett, Sweet
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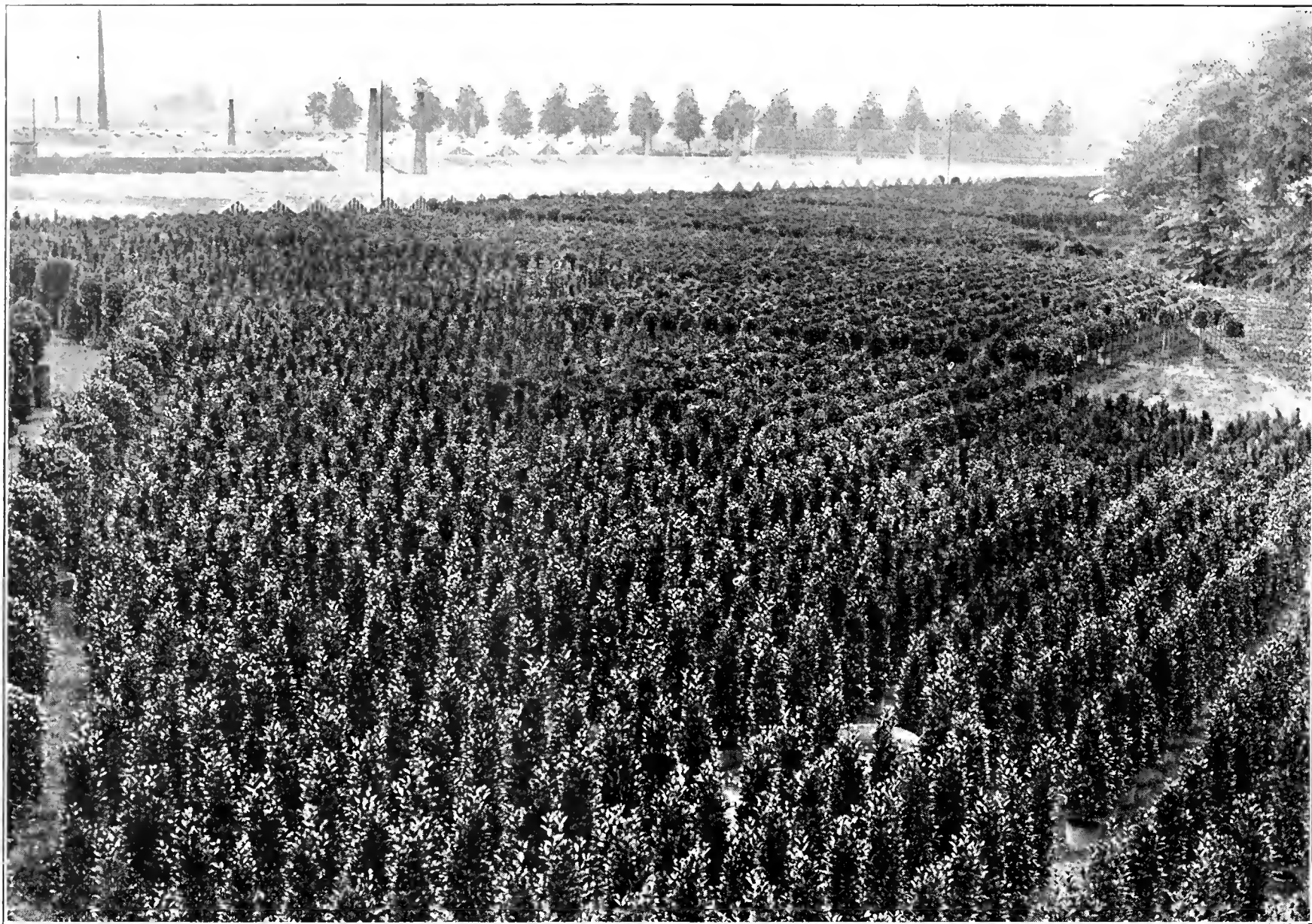
THE LARGEST STOCK OF CRABS IN
THE COUNTRY THIS SEASON

LET US PRICE YOUR LIST, WE ARE PUTTING THEM
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All extra smooth Stock—samples on request.

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"Just Bays." Part of our source of supply.

Thousands of

BAY TREES

ORDER NOW FOR SPRING SHIPMENT.

Direct Importation from Belgium.

Write us for special prices and booklet "Just Bays"—if you haven't already received them.

These trees are grown especially for us in all commercial shapes such as Standards, Half Standards, Pyramids, Columns, Imperials, Bush or Ball shape, etc., etc.

It will pay you to get acquainted with our "Just Bays" which are just what you need and should have to get in the front ranks with the leaders.

Let us have your order promptly. Trees can then be selected and sent with first shipments from Belgium early in April. Orders booked for direct import only. We are strictly wholesalers.

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— THE BAY TREE SPECIALISTS —

NURSERYMEN AND FLORISTS

looking for stock can find largest assortment in the
United States at the

Painesville Nurseries

Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
Plants, Grapes, Gooseberries, Small Fruits, Bulbs, Seeds, Palms
and other tender Greenhouse Plants

Have a large stock stored in frost proof cellars that can be shipped at any time desired;
switch from N. Y. C. lines direct into our packing house; can load without exposure.
Unsurpassed facilities for handling orders large or small. Catalogs and price lists free.

A few specials while they last:

STANDARD PEARS in assortment DUCHESSE DWARF PEARS BOURGEAT QUINCE
PRUNUS PISSARDI and TRILOBA CUTHBERT AND OTHER RASPBERRIES
CONCORD AND OTHER GRAPES

OUR SPECIALTIES ARE

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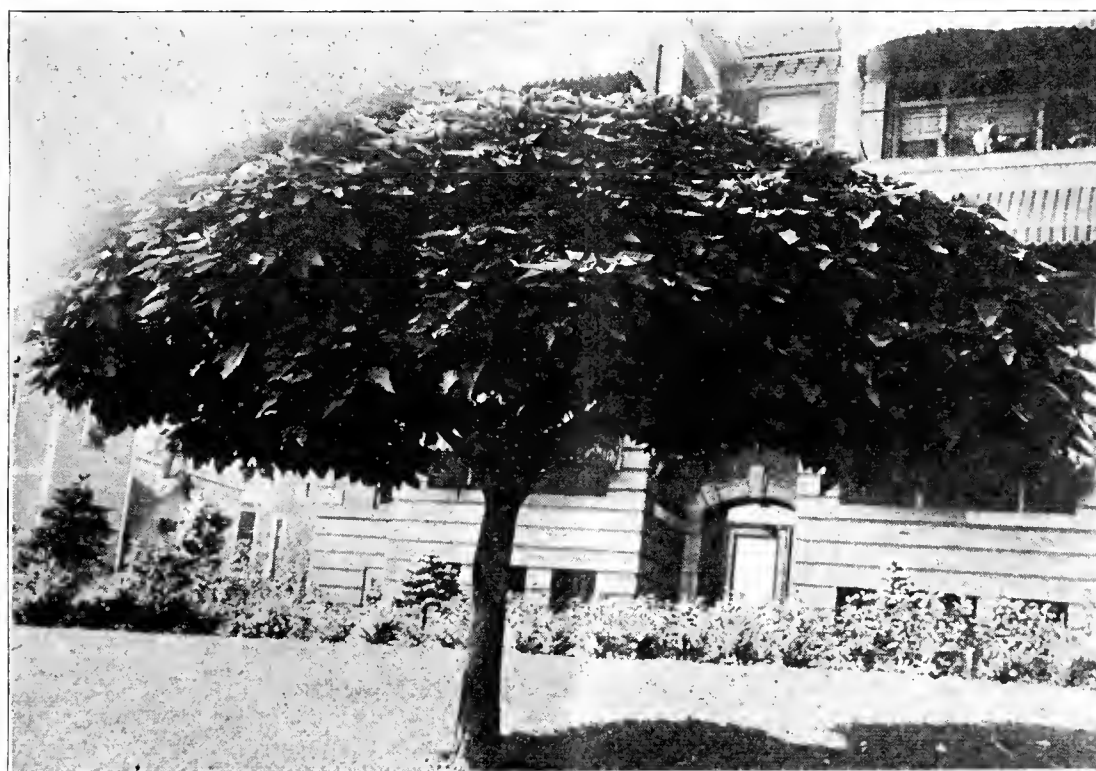
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PEACHES

PEARS

PLUMS

CHERRIES



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Ornamental
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Car Lots

Weeping Mulberries
Elm and Ash

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Hydrangeas, Bush
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NO TROUBLE TO PRICE YOUR LIST OF WANTS

55 Years

1200 Acres

44 Greenhouses

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CUT LEAVED BIRCH...

6 to 8 feet
8 to 10 feet
10 to 12 feet

HANDSOME TREES

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ATTRACTIVE PRICES

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ROCHESTER, N. Y.

Jackson & Perkins Company

offer to the trade an unusually complete assortment of Fruit and Ornamental Stock, including some things scarce and hard-to-find; their Tree Hydrangeas, Tree Lilacs, Roses, Clematis, Ampelopsis Veitchii, Dwarf Apples, Cherries on Mazzard, and a few other Specialties, have earned for the J & P goods the name of

"PREFERRED STOCK"

A few more buyers can be taken care of very well. Want Lists are invited. January Bulletin will be sent on request. The address is

Jackson & Perkins Company

Dispensers of The Preferred Stock, grown at
NEWARK, which is in WAYNE COUNTY,
near Rochester, New York

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APPLE QUINCE PEAR CHERRY
PEACH PLUM

A Fine Block of
Own Root Roses

ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
EVERGREENS PEONIES PHLOX
PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

Write for our Special Prices

Special Attention given to Dealers, complete lists
and carload lots.

W. & T. SMITH COMPANY

GENEVA, N. Y.

63 Years

700 Acres

Azalea Indica
(Home-Grown)

Berberis Japonica
Magnolia Grandi-
flora

Yucca Treculeana
Biota Aurea Nana

Field-Grown
Roses

Write for Prices
and Information



Get Some of This Stock For Your 1911 Trade NOW

We have a considerable stock of the trees and shrubs mentioned above, and offer them to the 1911 trade at reasonable prices. This is all clean, first-class stock, and will be sure to please your trade in every way.

Our location offers a distinct advantage, in that we can grow stock here which succeeds admirably both north and south of us. The above varieties are such as will transplant readily and thrive for your customers, almost regardless of location, after the splendid start which they get in this warm and genial climate. We have thousands of satisfied customers in nearly all parts of the country.

We grow a full stock of Ornamentals, Fruits and Nuts, and invite inquiries from the trade relative to particulars on anything in which they are interested.

P. J. Berckmans Co., Inc., Fruitland Nurseries
Augusta, Georgia

Established 1856

Over 450 Acres in Nurseries

The Best Tree Digger on Earth



Used and Recommended by Leading Nurserymen.

The one we have used for years and by far the most satisfactory of any we have ever seen. It does exactly the work for which it was designed and does it right. If interested we will be glad to send description and prices.

Stark Bros. Nursery & Orchards Co.
LOUISIANA, MO.

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Evergreen Seedlings

IN LARGE QUANTITIES

EVERGREENS FOREST TREES

A Full line of Ornamental Trees
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ESTABLISHED 1848

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APPLE, assorted, heavy in light grades

PEAR, Standard, assorted, extra fine lot of Kieffer

CHERRY, 2 year, the finest stock we have ever grown

PLUM, Japan and English, good assortment of varieties

PEACH, choice stock in all grades

EVERGREENS

ARBOR VITAE, 2 to 8 ft.

NORWAY SPRUCE, 2 to 8 ft.

ARBOR VITAE, 2 to 4 ft.

BALSAM FIR, 2 to 5 ft.

These evergreens have been transplanted, and are fine specimen plants. Can supply in carload lots

Silver Maple, Am. Elm, C. L. W. Birch, all sizes
Catalpa Bungei, 3 year heads

Catalpa Spec. Seedlings, all grades. Golden Willow 2 year plants

Stock grown at Dansville, N. Y. and Troy, O.

Franklin Davis Nursery Co.

BALTIMORE, MD.

We offer for FALL 1910 and
SPRING 1911

APPLE 1 and 2 year; heavy on York Imperial, Stayman's Winesap, Blacktwig, Grimes Golden, and other standard varieties.

PEAR, STANDARD, Kieffer, 2 and 3 year, and other leading kinds.

PEACH; Expect our Peach to be fine; we have a heavy stock and will book orders for several carloads now. Peach are bound to advance. We are heavy on Elberta, Carmen Crawford's Late, Old Mixon Free, Stump, Beer's Smock, etc., etc.

ASPARAGUS, 1 and 2 year; Palmetto, Barr's, Conover's Giant.

CHERRY, 2 yr. leading varieties.

PRIVET, 1 and 2 year, a fine lot of heavy No. 1 plants.

POPLARS, a fine lot of Carolina and Lombardy in all sizes, by the carload.

PLANES, a fine lot of Oriental Planes in all sizes.

CATALPA SPECIOSA, several thousand at a low price.

ELMS, AMERICAN; Several hundred nice trees.

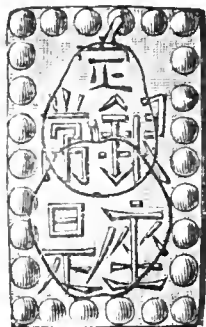
WALNUTS, JAPAN, in all sizes.

Extra large bushy SHRUBS, such as Altheas, Weigelas, Spireas, Deutzias, Snowballs, Judas, Hydrangea, P. G.

Extra large SUGAR MAPLES several hundred 3 to 3 1-2 and 4 to 4 1-2 inches, fine trees, with good heads and straight bodies.

We also have a general line of other stock. Send us your want list.

Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries
Huntsville, Ala.

JESSIE S. MOSS, Prop.

We offer for Fall of 1910 and Spring of 1911 in large quantities as usual:

SPECIALTIES

APPLES—Commercial varieties, one year, in large supply. As fine in quality as ever grown.

PEARS—Kieffers, one and two years old. A much smaller crop than heretofore.

CHERRIES—On Mazzard. One year. Bing, Lambert, Napoleon, Black Tartarian.

CHERRIES—On Mahaleb. One and two years. Ea. Richmond, Dyehouse, Montmorency, Wragg, Royal Duke, in small supply.

PEACHES—We excel in Peaches, and of these we will have as fine a stock as we have ever grown, both in one year and June Buds.

ROSES—Budded. We will have a large and fine stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.

PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.

MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

See Price List for particulars.

Address, W. F. HEIKES, Manager,
HUNTSVILLE, ALA.

Have you seen and examined the quality and finish of our

Rawhide Brand of Shipping Tags and Tree Labels

printed or plain, strung or wired?



This stock is especially adapted to the most severe usage, being thoroughly waterproof & weather-proof. "Once used, always used."

Send for samples and prices. Our reference are the largest nursery men in the United States.

The Denney Tag Co.

WEST CHESTER, PENNSYLVANIA

During the Course of a Shipping Season:

Every nurseryman must buy some stock to fill out his orders. To know "right off the reel" where to get that stock is a big advantage. It means the saving of much valuable time. We call to your attention our facilities for handling such orders.

We have 225 acres devoted to the proper growing of Hardy Ornamental Nursery Stock and it is stock that will satisfy the most particular customer. Every plant in our nursery has been properly grown and is healthy. The stock is fully up to grade and we have a fine assortment of varieties and large quantities of all sorts. Furthermore, we are in a position to handle and ship all orders with a promptness that will please. When in need—just think of Meehan—and send in your order. We will give you service and quality that you can depend upon. Send for our complete catalogue showing what we have to offer and the prices. This list will prove invaluable to you and a copy should be on your desk.

Again—Do you need any small stock for transplanting to grow on for future use? We still have a limited quantity of first-class material for this purpose. Ask for one of our revised lists.

We solicit your patronage and in return offer you satisfactory service and best value for your money.

THOMAS MEEHAN & SONS

Wholesale Growers of the Best Nursery Stock
DRESHER, near Philadelphia, PA.

BOBBINK & ATKINS

WORLD'S CHOICEST NURSERY PRODUCTS

ROSES, in all kinds and varieties

PALMS and BAY TREES by the thousands

EVERGREENS and CONIFERS, in several hundred kinds and varieties

Pot-grown FORCING PLANTS, Autumn Delivery

RHODODENDRONS, Hardy, ENGLISH HYBRIDS, Maximum and Catawbiense

FRUIT-TREES, home-grown, imported, DWARF and TRAINED

BOXWOOD, in all shapes, forms and sizes

SMALL FRUIT, in all kinds and varieties

HARDY AZALEAS, in all varieties and colors

NUT TREES, profitable kinds

FLOWERING SHRUBS, in bush and standard forms in hundreds of kinds and varieties

OLD-FASHIONED, Hardy FLOWERING PLANTS, in thousands of kinds and varieties

JAPANESE MAPLE, in all colors and varieties

PAEONIAS, IRIS, PHLOX FERNS, HARDY GRASS

SHADE TREES, in hundreds of useful and attractive varieties

KITCHEN HERBS and ROOTS

MAGNOLIAS and other FLOWERING TREES

RUTHERFORD PARK LAWN GRASS SEED

WEeping and STANDARD TREES, in many varieties

HEDGE PLANTS, in all popular kinds

AUTUMN BULBS, Dutch, French and Japanese kinds

HARDY TRAILING VINES and CLIMBERS

Interior and Exterior DECORATIVE PLANTS, in large variety

HARDY VINES and CLIMBERS in pots

VISITORS to our nurseries are always welcome

SPRING and SUMMER FLOWERING BULBS, ROOTS and PLANTS

ASK FOR WHOLESALE CATALOG

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RUTHERFORD, N. J.

The North-Eastern Forestry Company,

New Haven, Conn.

We have large quantities of white and Scotch pine seedlings for sale at remarkably low prices.

∴ This stock is native grown and of best quality.

Write us also in regard to
TREE SEEDS

Surplus Small Fruit Plants

Almost all in storage for immediate shipment.

GOOSEBERRIES AND CURRANTS

5,000 Downing
5,000 Pearl
10,000 Houghton
3,000 Industry
2,000 Josselyn

10,000 White Grape
3,000 Black Naples
10,000 Red Cross
15,000 North Star
5,000 Victoria
5,000 White Dutch
3,000 Perfection
5,000 Red Dutch
7,000 Fay's Prolific
3,000 Pomona
8,000 London Market
12,000 Wilder

RASPBERRY PLANTS

50,000 Cumberland
10,000 Eureka
30,000 Gregg
100,000 Kansas
10,000 Munger
15,000 Plum Farmer
10,000 Older
20,000 Black Diamond
30,000 Columbian
5,000 Shaffer
15,000 Haymaker
3,000 Eaton
20,000 King
15,000 Miller
30,000 Cuthbert
5,000 Marlboro
10,000 Loudon

CUTTINGS

California Privet
Amoor River Privet
Carolina Poplar
Volga Poplar
Lombardy Poplar
Golden Willow
Althea
Spirea Van Houtei
300,000 Grape
100,000 Currant
50,000 Gooseberry

BLACKBERRY PLANTS

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15,000 Erie
25,000 Eldorado
15,000 Rathbun
10,000 Mersereau
3,000 Ancient Britton
5,000 Ohmer
3,000 Loganberry
20,000 Ward
30,000 Snyder
30,000 Taylor
10,000 Wilson
5,000 Wachusett
3,000 Iceberg

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5,000 Josselyn layers
10,000 Houghton small plants
20,000 " layers
15,000 Downing small plants
25,000 " layers
5,000 Pearl small plants
5,000 " layers
20,000 Currants small plants
10,000 Calif. Privet small plants

100,000 Grape Vines, assorted
200,000 Asparagus, assorted
25,000 Horse Radish
25,000 Rhubarb
1,000 Holt's Sage
100,000 California Privet
5,000 Russian Mulberry
2,000 Rocky Mountain Cherry
10,000 Cinnamon Vine Tubers

100,000 Transplanted Raspberry Plants, extra heavy, for Retail Trade.
500,000 Strawberry Plants, extra fine. Price list free.

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Cyclopedia of American Horticulture

L. H. BAILEY

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Practical instructions on every subject connected with Horticulture. Four handsome quarto volumes; 2,800 original engravings, 50 full plates; 2,016 pages and 4,357 articles; Total plants accounted for 24,434.

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FRUIT TREES

(ENGLISH GROWN)

OVER HALF A MILLION
TO SELECT FROM

APPLES: Maidens, Bushes and half-Standards are a leading feature with us. 250,000 in stock.

PLUMS AND PEARS. Enormous stock in leading kinds.

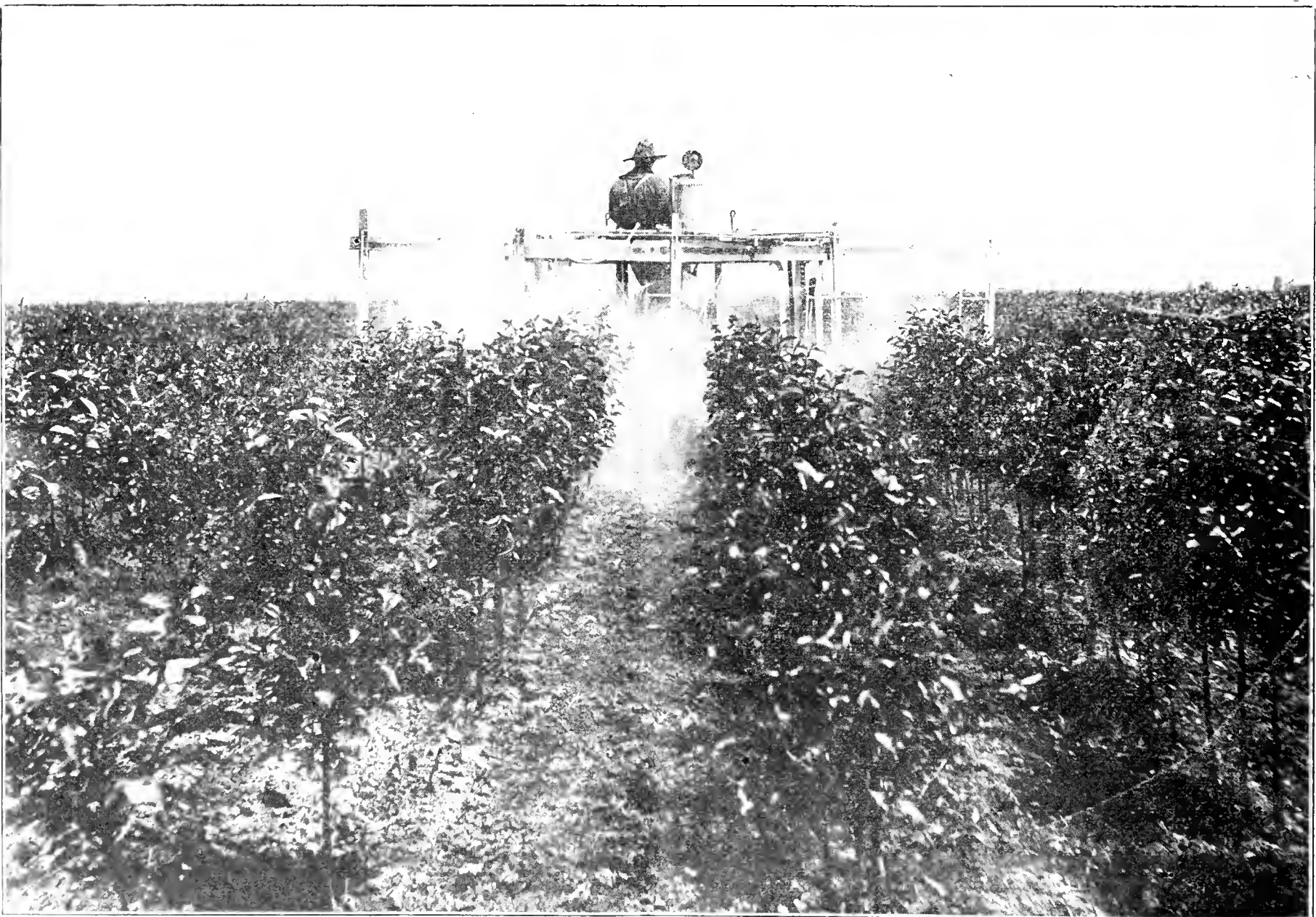
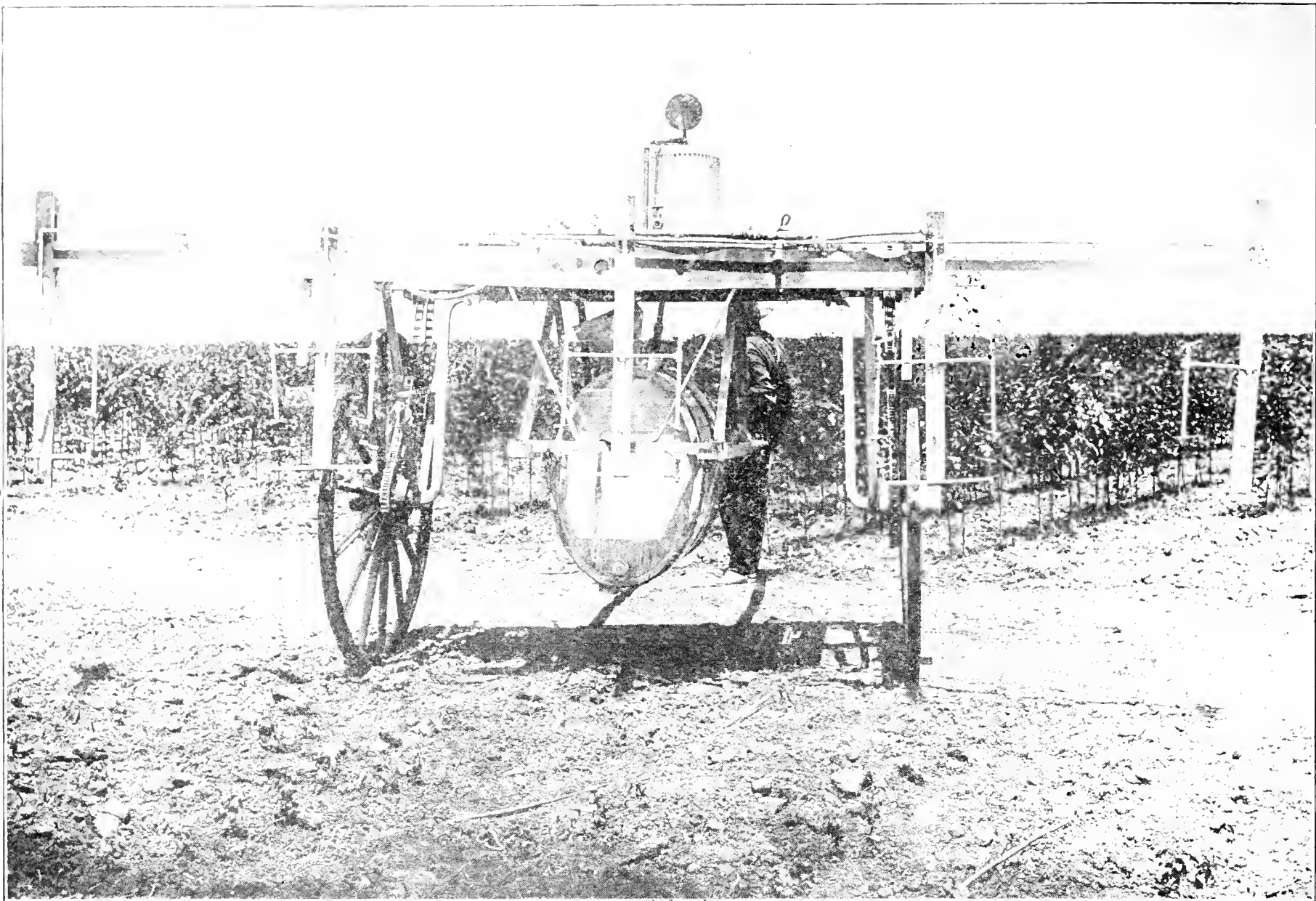
CHERRIES, Peaches, Nectarines and Apricots in heavy quantities.

Fruit Trees are our leading line.

Inspection invited to nurserymen visiting England. Our nurseries are only ten miles by rail from London. List of varieties grown and quotations sent on application. We have no agents. Write direct to

S. SPOONER & SONS

**Fruit Tree Growers and Nurserymen
HOUNSLOW, ENGLAND**



THE ILGENFRITZ NURSERY SPRAYER. A DEVELOPMENT IN THE LINE OF SPRAY MACHINERY BY ILGENFRITZ SONS' CO., MONROE, MICH. ADAPTED TO SPRAYING TREES IN NURSERY ROWS.—SEE PAGE 104.

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XIX.

ROCHESTER, N. Y., MARCH, 1911

No. 3

THE MEETING OF THE AMERICAN POMOLOGICAL SOCIETY

Twenty-six Horticultural Organizations Represented by Delegates

The American Pomological Society held its opening meeting of the 32d biennial session in the Tabernacle at Tampa, Florida, February 9th, at eight o'clock. The delegates and members were welcomed by Mayor McKay of Tampa on behalf of the City and Board of Trade, and by Mr. G. L. Taber, ex-President of the Florida State Horticultural Society, on behalf of that body. The addresses of welcome were responded to by Col. G. B. Brackett, U. S. Pomologist, Washington; B. J. Case, President New York State Fruit Growers' Association; R. B. Whyte, President Ontario Horticultural Society, representing these respective sections. The attendance was larger than at any meeting of the Society during the past 20 years with the exception of the Kansas City meeting in 1905.

The program was devoted to a considerable extent to questions relating to tropical and sub-tropical fruit growing, but fruit transportation and storage problems occupied one entire session; while another session was devoted to nut culture. In addition, problems connected with the control of orchard enemies, and the probable injury to fruits by spring frost were also discussed. Much new and valuable information was obtained on these topics.

The Society decided to publish a volume of Pomological History, and made arrangements to that end. This volume is to cover the history of fruit growing in the United States; not only recording the beginning of the industry of the various fruit sections, but completing it and giving a statement of the present statistics and future outlook of orcharding in those sections in which great development has taken place in recent years and where the promise of future growth is bright.

A special committee was appointed to co-operate with the committee on revision of catalogue for the purpose of reconsidering the rating of commercial varieties, with special reference to market fruits grown in different parts of the country. Somewhat recently strong representation has been made by western fruit growers that the present ratings of the varieties of apples grown in California and on the Pacific coast as well as in the inter mountain region did not do these varieties justice. Inasmuch as the ratings and score cards of the American Pomological Society are used as standards at the exhibitions, the improvements that affect the commercial ratings in the line of the adaptation of the

variety to its surroundings is of unquestioned importance. This committee is requested to revise and present at the next meeting of the society a report covering this ground. At the same time the score card committee may extend its sphere of operations and make such modifications of the score card already in operation as seems advisable.

The following officers were elected: President, L. A. Goodman, Kansas City; first vice-president, G. L. Taber, Glen St. Mary, Florida; Secretary Craig and Treasurer Taft were re-elected. The executive committee as follows: C. L. Watrous, Iowa; W. C. Barry, New York; C. W. Garfield, Michigan; W. S. Hart, Florida; W. T. Macoun, Canada.

EXCURSIONS AND ENTERTAINMENTS

The Board of Trade of Tampa proved themselves hospitable and thoughtful hosts. The visitors were taken by boat to Manatee and Bradentown where they were shown the splendid citrus orchards of that region, and where they had incidentally the opportunity of seeing the largest grapefruit grove in the world; the famous Atwood grove of 350 acres. In connection with this they were able to witness the systematic operations of washing, grading, packing and shipping of citrus fruits in a well ordered packing house. This region is in the midst of the celery, onion and lettuce fields, where car loads of these products are moved daily. As the return journey occupied some four hours, a meeting was held on the steamer, and the time occupied in making the journey thus doubly utilized.

THE SPONGE INDUSTRY

Nearly a whole day on the thirteenth was devoted to an excursion to the greatest sponge fisheries in the world at Tarpon Springs. Here the industry was seen in all its interesting phases. Incidentally marvellous exhibitions of deep sea diving were witnessed. The unique day was completed by a Greek lunch provided by the residents of Tarpon Springs, transportation having been furnished by the Tampa Board of Trade.

PAPERS AND ADDRESSES

Mr. G. L. Taber, in presenting an address of welcome, on behalf of Florida Horticulturists, gave a vivid view of the extent and native resources of the state. He reminded his

audience of the size of the Florida "boot," which from extremity of heel to tip of toe extends westward from the Atlantic nearly four hundred miles; from the heel to the bootstrap north and south the leg is something over four hundred miles in length; while the strap of the boot has now become an integral part of the boot proper, being sewn thereto by the recently constructed Key railway, running from the East Coast to Key West. Mr. Taber made the point that of the citrus family sixty-two varieties were adapted to cultivation in various parts of this immense boot. With the draining of the everglades, a project now in process of completion, a vast area of fertile land would be made available, which undoubtedly in a few years would add tremendously to the crop output of the state.

FERTILIZERS FOR CITRUS FRUITS

One of the most interesting and instructive papers was on "Fertilizers for Citrus Fruits," by E. O. Painter of Jacksonville. The speaker outlined the various phases through which the fertilizing practice of the orange orchardists had passed in the history of citrus culture in Florida. This was as varied as interesting. The first era was the muck era, when muck from the lowlands was carted to large holes on the sandy lands dug for the reception of the trees. This was unsuccessful. The turning under of cowpeas and green cover crops had frequently been overdone with the result that the land was soured. After these initial attempts, the fertilizer agent arrived with his perfect plant food. Among the first fertilizers used was cotton seed meal, and the land was fairly painted with this mixture, once and sometimes twice a year; the result—coarse fruit of poor quality. Following cotton seed meal, came tobacco stems, slaughterhouse refuse, as tankage, etc. Then came the hard wood ash era, and this amounted to a craze, for as much as \$50 a ton was paid for ashes analyzing not more than five per cent of potash. The ash craze subsided and was followed "by the Thomas slag mania, the gas-house lime delusion, and the soft phosphate hallucination. They all had their day, were found wanting, and dropped." As a result of these spasmodic and unsystematic trials, the Florida Orange was in the way of acquiring a bad reputation for carrying qualities; but recent more careful experiments instituted by the agricultural college and investigating orange growers have brought about new systems and new methods which seem destined to remain as permanent practices. Sulphate of potash, in the writer's opinion, had come to stay. He cited the fact that twenty-five years ago probably not more than twenty-five tons of this material were used in the entire state. At the present time over thirty thousand tons of different brands of potash will be used this year. Most orange tree fertilizers now contain from eight to fifteen per cent of potash. "It is generally conceded that an all around fertilizer for bearing orange trees is one containing four per cent ammonia, six per cent available phosphoric acid, and twelve per cent potash; but these amounts must be varied with the location and condition of the soil. If the land is low or of the hammock type, the ammonia should be reduced and the potash and phosphoric acid increased.

For young growing trees the potash can be reduced two-thirds, and the ammonia increased one unit. For early maturity of fruit, reduce the percentage of ammonia to two per cent or even less, and increase the available phosphoric acid to ten per cent. In connection, do not cultivate the grove after the first of February. Use pure chemicals and scatter them broadcast around the trees."

Pomelo, grape fruit, is a heavier consumer of fertilizer than the round orange. The lemon is also a gross feeder. Mr. Painter emphasized the fact that the flavor and character of an orange can be so much changed by fertilizing that one would not recognize the fruit two different seasons as coming from the same tree. He recommended for ammonia, sulphate of ammonia, nitrate of soda, nitrate of potash, and possibly cyanamid; for potash, sulphate of potash, high grade, double manure salts, or low grade; for phosphoric acid, dissolved bone, or acid phosphate, the former being best, but the latter being cheaper.

DISTRIBUTION OF PEACH YELLOWS IN NURSERY STOCK

BY M. A. BLAKE

Mr. Blake made the point that nursery trees may often be affected with peach yellows and yet not show it the first season. Inasmuch as thousands of peach trees are sold at the end of the first season's growth, the possibility of disseminating the disease directly from the nursery is obvious. The difficulty is aggravated by the fact that it is sometimes quite impossible to detect the disease in the one year old tree. Occasionally the one year old shows the presence of the disease, in which case it may and should be promptly destroyed. Mr. Blake cited the case of where a single tree from a certain nursery was the means of contaminating an entire orchard. The only abnormal condition in the case of these nursery trees observable was the peculiar character of the foliage, which, in some cases, had a tendency to drop. Otherwise the trees were fairly normal.

The point of these studies in yellows infestation from the nursery was that nurserymen should not use buds from the nursery row. Only healthy buds from known healthy orchard trees should be selected. Otherwise there was the continuous possibility of propagating from diseased stock. When we consider that only virulent cases in the nursery become apparent, the danger in the situation is emphasized.

Augusta, Ga.—According to a despatch in the Charleston, S. C., *Post*, Fruitlands, the famed nursery owned by the late Prosper J. Berckmans, is to pass out of the control of his sons into the hands of his widow, who was Mr. Berckmans' second wife, the sons being by the first. Several years ago Mr. Berckmans retired from active business and the sons took over the control of Fruitlands through a holding company in which Mr. Berckmans retained a large interest, however. No will has been filed, but a deed has been recorded in the clerk's office, whereby the entire Fruitlands property is made over to the widow. The lease of the company will not expire until 1918. —*Florists' Exchange*.

THE NATIONAL NURSERYMAN:

We enclose a dollar for another year's subscription to the NATIONAL NURSERYMAN, as we could hardly do without it.

Kansas.

WORDEN & Co.

THE STUMP BURNER AS AN AID TO CLEANING LOGGED OFF LAND

Not the least of the problems of the Northwest Pacific Coast fruit grower is the clearing of his land, if he is a beginner, of the native tree crop and its remains. The mere cutting of the timber and its removal is but an incident in the work of fitting the land for orchard trees. The removal of the stumps represents the really expensive part of the preparatory operation. This may cost \$150 an acre, or it may amount to \$300 or \$400 per acre, which is a serious item to be added to the initial cost of the land.

In a recent issue of *Better Fruit*, W. H. Lawrence of the Puyallup, Washington, State Experiment Station, discusses different methods of ridding the land of these stumps. It appears that most of the older methods are objectionable on account of expense. The hand method is the pioneer, but is being gradually superseded by other schemes. Capstans and stump pullers are used advantageously where the growth is not large, but the cost is high. Dynamite and stumping powder are also used widely, but they have the disadvantage of excavating large holes in the ground which have to be filled before plowing, and the further disadvantage of scattering the subsoil over the surface. The cost of the explosive and the work of hole-filling make this method expensive. Pitch pine stumps are also eradicated by boring intersecting holes which form flues, and by this means they are burned; but the method is also open to many objections, and requires very close attention. The use of stumping powder is very general, and perhaps this method is the most usual one employed; but it is open to the objection that many small blasts are required to eradicate the basal roots.

Finally, the stump-burning machine has been introduced. It "consists of a one-half horse power gasoline engine with a thirteen-inch fly wheel, adjusted to run 650 revolutions per minute, a circular fan, No. 4 American blower, with eight and one-half inch fan and two and one-half inch pulley provided with a patent wind distributor, tapped to attach five lines of one and one-half inch hose, hose couplings of pieces of one and one-half inch rubber hose of different lengths, a number of pieces of galvanized iron tubing, a few small iron plates and several lengths of boiler tubing slightly curved at one end, which are used as blow pipes. The hose couplings are used to make connections." The tubing is connected with short pieces of rubber hose eighteen to twenty inches in length. This forms a machine comparatively small, of light weight, and cheap construction.

The writer describes how this machine was used to burn up stumps of different types of trees and varying sizes. The average cost of burning stumps large and small was \$2.30. The average size of these stumps was forty-seven inches in diameter. The cost of removing stumps of this kind by using stump-blasting powder would amount to

\$3.25, besides the cost of filling the hole created by the explosion, and the subsequent work required to destroy the stump after it had been blown out. The writer draws the following conclusions from his experiments with the stump burner:

1. The machine used is easy to handle and serviceable.
2. Much time is gained by boring the holes by power and makes it possible to bore large numbers of holes in a very short period of time.
3. Directing the flame by making vents insures burning in the desired direction. By the use of these vents, fire may not only be driven in the desired direction, but the rate of burning may be regulated. The rate of burning may be easily regulated by placing pieces of bark or sod over the vents or by inserting the section of the limb of a tree.
4. Wood burns more rapidly when given a draft than where the fire is confined. The rate of burning may be regulated by the amount of air forced through the vents by the use of a blower.
5. Considerable effective burning may be accomplished by boring a series of holes for vents, after which the fires may be started and allowed to burn by the natural drafts—burning trees into sections and the tops of large stumps, etc.
6. Combining the methods of burning stumps and logs by the use of a stump-burner and boring intersecting holes and burning, so that the fire is guided to the best advantage and caused to burn briskly by a continual forced draft is both practicable and advisable."

NURSERY INSPECTION IN NEW YORK

Five hundred and seventy-two nurseries have been inspected and all stock examined, including 116,640,977 trees and plants of different kinds. Seventeen thousand and eighty-one trees have been destroyed on account of being infested with San José scale which, if distributed to parts of the State now free from this pest, would have caused untold damage. More than twelve million seedlings recently imported have been examined and 3,726 nests of Brown-tail moths as well as some nests of Gipsy moths have been found. These dangerous pests are destroyed with the utmost care. Thus far, although they have appeared at more than a score of different places in our State, agents of the Department have in every instance completely eradicated these insects. The importance of this work may be estimated when it is stated that in Massachusetts last year more than \$1,000,000 was spent by Federal, State and municipal governments for the purpose of keeping under control these pests which unfortunately have gained a foothold there.—From *Eighteenth Annual Report of the N. Y. State Dept. of Agriculture*.

HOW TO GROW BLACK WALNUTS

By Charles A. Scott

Under favorable conditions the Black Walnut is a tree that is easily grown. The seedlings reach a height of from 12 to 24 inches the first season, and this height growth is exceeded from year to year during the sapling and pole stages of development. The nuts should be planted where the trees are to be permanently located for the reason that the seedlings develop a very strong tap root the first season and transplanting is impractical.

THE SEED

The nuts mature in October, and they should be gathered soon after they fall from the trees. They should not be hulled as the hull in no way interferes with germination and it protects the kernel from injury by drying. The only treatment necessary before planting is to see that the nuts do not dry out, as drying seriously injures their germinating powers.

Nuts for fall planting keep perfectly in small piles in cool, shaded places. The piles should not be made more than 12 or 15 inches in height, on account of danger of the nuts heating if the pile is large.

For spring planting the nuts should be stratified over winter. They may be stratified in moist sand or leaves in any protected place. In stratifying, a two-inch layer of sand or leaves should alternate with a layer of nuts of the same depth. The pile should be kept moist and allowed to freeze and remain frozen throughout the winter.

PLANTING

The nuts may be planted either in the fall or in the spring with equally good results. The fall planting should be done any time after the nuts are gathered up to the time the ground freezes. The spring planting should be done as soon as the ground is in a workable condition. The danger in delaying planting until later in the season is that the nuts begin to sprout soon after they thaw out, and once through the shell the sprout is easily broken off. It is also necessary to exercise due precaution to prevent the nuts from becoming dry after they have been stratified as the germ is then very delicate and easily injured.

WHERE AND HOW TO PLANT

The ground in which walnuts are to be planted should be thoroughly cultivated for two or three years before the nuts are planted as the trees will not make a satisfactory growth in virgin soil. The Black Walnut is a tree that requires the deepest, richest soil that can be found along creek and river valleys for its best development, yet at the same time it makes a very satisfactory growth on the prairie soil of the eastern part of the state. In the western part of the state the planters should select the low ground along ravines for planting sites when possible.

The nuts should be planted three feet apart in furrows ten feet apart and not more than four inches in depth. After the nuts are planted the furrows may be filled in with a cultivator. It is not necessary or even desirable to level the ground more than is required to securely cover the nuts. If the furrows are not leveled they will catch the excess surface water in times of heavy rainfall.

If the nuts cannot be planted in furrows the next best plan is to plant them in seed spots. Seed spots are places where several nuts are planted in an area sixteen or eighteen feet in diameter to ultimately form a small group of trees. The ground for such planting should be spaded and pulverized so as to increase the moisture-holding capacity of the soil, and from six to ten seeds should be planted in each seed spot.

CULTIVATION AND CARE

On account of the Black Walnut being a lover of moist, rich soils it is very sensitive to dry, parched conditions. It is therefore very necessary to give the seedling trees the best of cultivation until they develop a good root system and take possession of the ground. Thorough surface tillage that will maintain a dust mulch is the most desirable cultivation. When it is impossible to give the trees such cultivation, as in the case of seed spot planting, it is a good plan to mulch the ground with straw to keep down the grass and weeds. In all events keep the ground around the seedling trees free of weeds and grass sod.

After the walnut trees are five to six years old it is often advisable to underplant them with such trees as the box elder, green ash, or red cedar, so as to completely shade the ground. Shading the ground and keeping out the weeds and grass are factors vastly more important in tree culture than most people are willing to believe. The walnut has very light foliage and the grasses and weeds soon take the ground unless some other trees with heavier foliage are planted with them.

BREEDING GRAPES

Mr. T. V. Munson, the well known grape breeder and nurseryman of Denison, Texas, presents an interesting discussion on the breeding of grapes in the magazine of the American Breeders for the last quarter of the year 1910. In this article, Professor Munson takes occasion to contravert the somewhat common belief that the female vine parent transmits vegetative characteristics, while the staminate or male parent transmits fruit characteristics. Such has not been his experience. He emphasizes the fact that in grape breeding there seems to be no rule or law which enables the breeder to anticipate the character of the offspring to be produced by special combinations. He says in some combinations all characters of one parent are dominant, resulting in all others being recessive.

TEXAS NURSERYMEN IN SESSION

Important Resolutions

The Texas State Horticultural Society met in Austin, Texas, on Jan. 26th, and 27th. There was a good attendance and the sessions proved quite interesting. A number of strong resolutions were passed, one concerning experimentation with fruit trees and other trees looking to the study of root diseases to be reported on from year to year and to cover a term of five years or more as set forth in appended resolutions. We are glad to state that the departments of experiment stations and others interested are taking hold of the matter vigorously.

One of the special events of the occasion was an automobile ride seeing Austin. Austin is a beautiful city, different from most Texas cities in that the topography of the country is quite rolling and the scenery consequently very interesting. There are a number of state and other institutions around Austin as well as a number of large private enterprises which together with the state capitol, one of the finest in the United States, give to Austin quite an air of importance and attractiveness.

The nurseries of F. T. Ramsey & Son are located here, Mr. J. M. Ramsey, Jr., member of this firm being president of the State Horticultural Association for this year. The Association received many courtesies at their hands.

The State Horticultural Society adjourned to meet at College Station during the Texas Farmer Congress in July of this year.

RESOLUTIONS ADOPTED

Your Committee on Resolutions beg to report favorably upon the following:

WHEREAS it is believed that much agitation of the subject of diseases of trees, through the press and otherwise, without proper knowledge and without offering proper relief, is proving detrimental to the orchard and tree planting interests and to the Horticultural interests generally of our State, and

WHEREAS it is believed that there is a great need of more knowledge of these diseases and their effects and cure, based upon actual demonstration and that it is feasible and proper to inaugurate and maintain experimentation looking to this end and to the publicity of the results of this work, and that the results would be greatly to encourage rather than discourage tree planting as is the case at this time, therefore, be it

RESOLVED, that the Texas State Horticultural Society appeals for such a campaign and calls upon the Texas State Department of Agriculture, and the State Experiment Station System, the United States Demonstration Farm System, the State A. & M. College and State University, the Orchardists, the Nurserymen and the devotees of Texas Horticulture to undertake a system of experimentation with tree and plant diseases with a view of more definite knowledge of such diseases and their prevention and cure. To this end we respectfully suggest

First: That this work be carried on under the jurisdic-

tion of the Texas Department of Agriculture, the Commissioner of Agriculture being Chairman of a chosen committee.

Second: That an advisory committee be chosen, composed of the Commissioner of Agriculture, or such member of his department as he may appoint; one member of the Texas Experiment Station staff by Dr. Harrington; one member from each of the State University and the A. & M. College, one orchardist, chosen by the Texas State Horticultural Society and one nurseryman chosen by the Texas Nurserymen's Association; one member by the Demonstration Farm Organization of the Department of Agriculture at Washington; the committee to be composed of not less than five members.

Third: That this committee shall seek to inaugurate and carry on a series of experiments with trees and plants and their diseases and insect pests covering a period of at least five years, invoking the co-operation of the State and National Experiment Stations, and of individuals and of organizations over the state, and involving the various types of soils, sections and climates of our state.

Fourth: That there be planted and maintained experimental plantings of various trees and plants at our said experiment stations, and by individuals in various sections who may volunteer to do so.

Fifth: That this advisory committee shall appoint a competent representative and shall duly empower him to map out this work and to supervise and direct it and report the work done and the results in September of each year; said report to be made to the Department of Agriculture and by this department properly published and given to the people.

Sixth: That the expenses of such work be taken care of by the Department of Agriculture.

Seventh: Realizing the great importance of this work and the good to be done, that for this additional work by the Department of Agriculture the Legislature be asked to appropriate ten thousand dollars in addition to the funds already appropriated to this Department.

JNO. S. KERR,

F. B. GUINN,

H. C. STILES,

Resolutions Committee Texas State Horticultural Society.

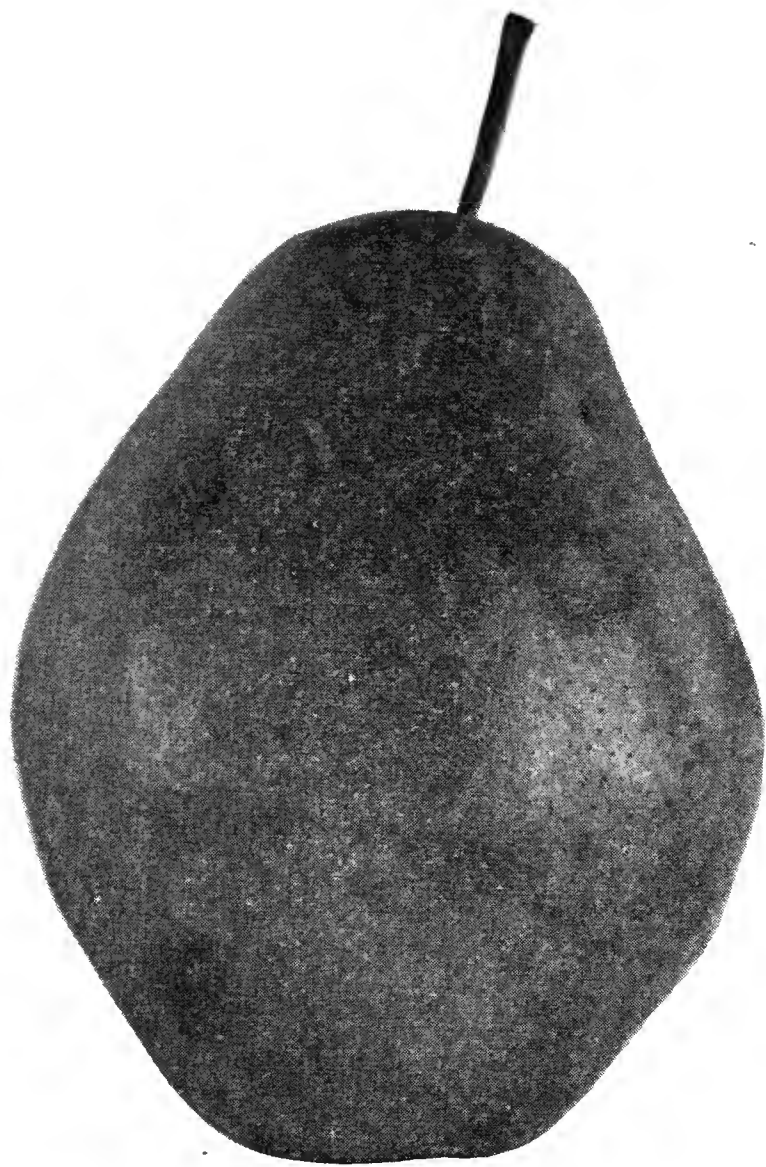
SPRAY NOTES

Messrs. Stuart & Co., of Newark, are thorough sprayers, and have had probably as much experience as any nurseryman in the country in the use of spray machines. Their experience is that most of the machines on the market are rather cheaply constructed, and lack durability. They are at present adapting compressed air, compressing this into steel cylinders, which are light and easily transported. We hope to be able to give some of the results of their experiments a little later on.

THE DOUGLAS PEAR

ED. NATIONAL NURSERYMAN:

In your late issue you gave a list of New Fruits, but in all there was no mention of any new Pear, and as we have one in the West, that has given us much hope, I thought it would interest the people at large. If not now, it has all the qualities to make it so in the future, when known. It



originated in Douglas County, Kansas, hence the name. It is a seedling of the Keiffer, crossed with the Angouleme; the best of both parents are retained in this offspring; yes, more, they are intensified. Its size and color, as well as season, are like the Keiffer, with less red, but no russet, only a pure yellow, with scarcely a trace of red.

It never has any hard, gritty parts about the core, and does not seem to rot and drop prematurely, as does the Keiffer. Its quality is as good or better than Bartlett, some say as good as the Seckel. That should be good enough, when its large size is considered. It is one of the most juicy pears grown, with a sprightly flavor. The tree is an early and prolific bearer, that may be its fault, when allowed to. One need not plant it and expect to wait years ere it will bear, as they have fruited the next year after setting in orchard, while on the same place Tysons have stood eighteen years and never fruited. That is largely a comparative description, with kinds well known. The original tree is fifteen years old and has no blight. No other kind has done so, and I have tried many old and new sorts for over forty years. That is one main hope for its success in the country, as blight has stopped the growing of pears in the West.

Kansas.

A. H. GRIESA.

SECRETARY HALL ON THE ANNUAL MEETING

ED. NATIONAL NURSERYMAN:

Regarding the 36th annual gathering of the American Association of Nurseryman at St. Louis, Mo., in June next, will say that, while it is somewhat early to make prognostications, there is no uncertainty about the success that will mark the convention. There is no room for any pessimistic opinion regarding it. President Stark is doing some reconnoitering among his official associates. He doesn't make much noise about it, but he is getting in his work, nevertheless. The program has not yet been completed, but our genial friend, Mr. J. H. Dayton, who is charged with the responsibility of catering to the tastes and needs of his brethren, is on the firing line, and will doubtless evolve an attractive menu for their delectation and profit. Of course you know that the headquarters of the convention will be The Southern Hotel, a hostelry specially built for convention business. Very reasonable rates have been agreed upon, and there is no cooler hotel in which to spend the average St. Louis summer day. Our industrious and painstaking friend, Mr. Frank A. Weber, the ideal head for an entertainment committee, has already made elaborate plans for members and their lady companions. He talks about a banquet, visits to "summer theatres," boat rides on the "Father of Waters," etc.

I am corresponding with the railroads regarding special rates. I wish you would urge members to send in their renewals of memberships and advertisements for the Badge Book, also to make an effort to secure new members.

JOHN HALL, Sec'y.

HOW DID YOU DIE?

Did you tackle that trouble that came your way
With a resolute heart and cheerful?
Or hide your face from the light of day
With a craven soul and fearful?
Oh, a trouble's a ton, or a trouble's an ounce,
Or a trouble is what you make it,
And it isn't the fact that you're hurt that counts,
But only how did you take it?

You are beaten to earth? Well, well, what's that?
Come up with a smiling face.
It's nothing against you to fall down flat,
But to lie there—that's disgrace.
The harder you're thrown, why the higher you bounce,
Be proud of your blackened eye!
It isn't the fact that you're licked that counts;
It's how did you fight—and why?

And though you be done to the death what then?
If you battled the best you could,
If you played your part in the world of men,
Why, the Critic will call it good.
Death comes with a crawl, or comes with a pounce,
And whether he's slow or spry,
It isn't the fact that you're dead that counts,
But only how did you die?

EDMUND VANCE COOKE.

Transportation

WESTERN MOVEMENT TO ADVANCE FREIGHT RATES ED. NATIONAL NURSERYMAN:

A subject of vast importance to nurserymen is that of transportation. There is a general movement on foot for an increase of freight rates on many commodities. The railways in the state of Minnesota served notice last fall on the state Railway and Warehouse Commission that freight rates on nursery stock would be increased, and it was their desire to have the same take immediate effect. The Railway and Warehouse Commission sent out notices to various nurserymen in the state. A committee appointed by these nurserymen appeared at a stated hearing and secured a postponement of any change in rates until after the spring delivery, basing their argument upon the fact that a large percentage of their output had already been sold on present basis of freight rates, therefore, it would be unfair and work a hardship to nurserymen if change be made before the spring delivery.

In February the committee appointed by the nurserymen, together with representatives of the various railways, appeared before the Railway Commission of the state of Minnesota at a final hearing. It is generally understood there will be a change in freight rates taking effect in this state about June first, 1911. But the movement is perhaps farther reaching than the state of Minnesota alone, for it may be taken up in other states in which case a general increase may be effected from east to west. This is a matter in which the National Association should interest itself and thru its executive committee or committees upon transportation the matter should be carried before the Inter-State Commission, if this has not already been done. Without question there is no commodity which benefits and makes more attractive the country thru which the railways pass, than does nursery stock of all kinds. We contend that in the Western Classifications No. 49, effective November 1st, 1910, all nursery stock which takes double first class rates is out of proportion and is excessively high, and that this double first class rate should be removed, and the classification lowered on various nursery items.

Will you, thru the columns of your valuable paper either publish this letter or an article in which the attention of nurserymen generally can be called to the importance of this matter? Whatever is done should be done immediately.

THE JEWELL NURSERY CO.,
E. A. SMITH, Vice-President.

TIMELY INFORMATION

The editorial office of THE NATIONAL NURSERYMAN is in receipt of a pamphlet entitled "Modern Methods of Harvesting, Grading and Packing Apples," issued by the B. G. Pratt Co., 50 Church St., New York City. This is composed of two illustrated articles on the subject quoted from the September, 1910, numbers of *The Fruit Grower*, and *Better Fruit*, and is presented with the idea of supplying to some extent the demand for information along this line.

GOOD FEELING AMONG FRUIT CROWERS

A. P. BATEMAN, Mosier, Ore.

The brightest sign of the time that I see for the fruit-growers of the Pacific Northwest is the increasing friendliness that comes from better acquaintance. The former feeling of bigotry, mistrust, and bitter antagonism between different organizations and districts is disappearing rapidly and with it will go much of costly competition. Foremost in this home missionary work, because of its interstate character, is the Spokane National Apple Show.

Great as is the gain to exhibitors from the publicity obtained through it, I think a far greater good to the growers will result from the "get-together" spirit, which inevitably follows this intimate acquaintance of the show, and the friendly rivalry or emulation as to which can show the most marked improvement in product or packing.

The comparison of products and work from all sections makes for a liberal education and sends every visitor to the show back to his home with higher respect for all others.

At this convenient railroad center, the growers of Oregon, Washington, Idaho, Montana, and British Columbia come with immense displays of their apples, put up in the best styles. I do not believe that the remarkable advance in excellence, noted these last three years, could have been reached in double the time through any other agency.

The standardizing of pack and packages, which has already been accomplished, is of inestimable value to the trade as a whole and is an index to what may be achieved in the near future when the growers, through their local fruit unions, cordially unite in systematic methods of marketing.

The apples from all districts of these five states must meet in the same markets. Why should not we growers meet beforehand and harmoniously plan the campaign?

You have already been told that definite steps were taken at Spokane to inaugurate this movement and doubtless you will soon hear much more about this live topic. What I say today is merely to add what emphasis I can to its importance and bespeak the most careful and broad-minded consideration of any and all proposals that may be advanced in seeking a solution of this problem.

UNIVERSAL NURSERIES

Frank J. Conboy, T. J. Buckley, and Thomas J. Bolger, all of Geneva, N. Y., are directors of the recently incorporated Universal Nurseries. The capital stock is \$5,000.

UTAH CHEERFUL

ED. NATIONAL NURSERYMAN:

I have just received this month's issue. It is full of interest. Utah is experiencing mild weather so far this winter, zero being reached but once and 4° below the limit. Sales are well up to the standard for this season with apple in strong demand. Prices range better than last year. Jonathan still leads with Winesap next in demand, Rome Beauty close up.

B. H. BOWER,
Provo, Utah.

The National Nurseryman

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AWARDED THE GRAND PRIZE AT PARIS EXPOSITION, 1900

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Correspondence from all points and articles of interest to nurserymen and horticulturists are cordially solicited.

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ROCHESTER, N. Y., MARCH, 1911.

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American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.

Association of Oklahoma Nurserymen—President, J. A. Lopeman, Enid, Okla. Terr.; secretary, C. E. Garee, Noble, Okla. Terr.

Canadian Association of Nurserymen—President—E. D. Smith, Winona; secretary, C. C. R. Morden, Niagara Falls, Ont.

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Eastern Association of Nurserymen—President, Wm. Pitkin, Rochester, N. Y.; secretary-treasurer, William Pitkin, Rochester, N. Y. Meets annually in January.

National Association of Retail Nurserymen—President, Wm. Pitkin, Rochester, N. Y.; secretary, F. E. Grover, Rochester, N. Y.

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Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.

Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans.; secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

STANDARD APPLE PACKAGES

The evolution of the apple package has been most interesting and is still in progress. Not so many years ago, the barrel was the only package, and the barrel was indefinite as to size and form.

It is not definite at the present time. Nova Scotia has one sized barrel, and various states have various other sizes.

An important epoch occurred in the history of apple packages when the growers of the West Coast introduced the box package. For several years, this was looked upon by Easterners as a mere novelty. However, when the best trade of the consuming centers of the East began to be monopolized by the western box package men, the viewpoint of the Easterner changed. He began to sit up and take notice. Prior to that, any attempt to standardize grading or adopt packages which would encourage careful grading was very emphatically tabooed at fruit growers organizations; but when the pocketbook was affected, the view point changed.

Then came the introduction through the efforts of eastern men who suddenly became interested in this box package matter, of measures regulating the size of the package which should prevail throughout the country. It is not surprising that the fruit growers of the Northwest Pacific and Intermountain region, who have been using a package evolved as a result of years of experience, should take exception to this action of the beginner. The western package does not contain quite a bushel. The eastern men on theoretic grounds say that the box should represent one of the three units of the barrel. The western growers rightly say, "We have established our box package; it meets our needs; it is recognized in the market; we desire no change." The eastern grower says, "We have erred these many years in not using a box package; we see the error of our ways; and now, in starting, we wish to begin right," forgetting in their virtuous impulse that a movement of this kind may bring injury to the teacher who gave them the lesson.

Is it so very important that in the case of the smaller apple packages, we should have them all exactly the same size? Is it not more important that we should know the amount of fruit which they contain as designated by pounds or by number of specimens, as in the case of the orange grower? On the other hand, if the East is insistent upon a box which shall contain a bushel of apples, then let us agree upon two sizes, one designated eastern box, the other designated western box. Each section would then secure the supposed advantage which it is contending for.

More important than the size of the box, in our judgment, is the factor of grading. That we should know what we are buying under specified grades is a prime essential. What U. S. size A, or U. S. size B, or U. S. standard grade mean should be common knowledge, and more than that should be universal practice.

At the outset, when the committee on grading of the American Pomological Society proposed United States grades, the standard was placed rather low; this for the reason that up to that time, the East had made no effort to

live up to any kind of a uniform grade, and it was thought wise to introduce it gradually on the educative basis, rather than at a single step. The western growers are rightly opposed to the large allowance of imperfect fruit, ten per cent, which the United States standard grade permits. The reputation of the West has been made on a practically perfect pack, and the buyer from New York who purchases the output of a packing-house in a leading fruit center in Washington and Oregon does not reckon on ten, eight, six, four, or even one-half per cent of imperfect specimens; he reckons on a perfect pack, one hundred per cent true, and he usually gets it.

We are strongly possessed of the feeling that the growers of the East should not impose upon their teachers in apple packing any of their recently acquired views, but should work out their own regeneration by methods which will not affect or disturb the methods of the men who have done so much for honesty in the packing of fruit.

POMOLOGISTS' CONVENTION The recent meeting of the American Pomological Society in Tampa, Florida, was significant in several ways. One of the striking features was the large number of states and horticultural organizations represented in the attendance. Between twenty-five and thirty organizations had delegates present, and practically as many states were represented. Advancing years and illness prevented the presence of a number of familiar figures. Many of these sent interesting communications, however, attesting to their interest in the old Society. Among the veteran members present, men who have been associated with the organization for half a century or more, were Col. G. B. Brackett, the octogenarian pomologist of the United States Department of Agriculture; Col. C. L. Watrous of Des Moines, expresident of the Society; Lewis Chase of the Chase Brothers, Rochester, New York; and J. J. Harrison, the senior member of Storrs & Harrison, Painesville, Ohio. These men have for half a century or more been active in promoting pomological progress in this country, and their presence at this meeting attests their present interest in the Society and fruit growing in general.

In responding to the addresses of welcome by the Mayor of Tampa and Mr. G. L. Taber on behalf of the State Horticultural Society of Florida, interesting addresses were made by President B. J. Case of the New York State Fruit Growers' Association, responding from New York and New England; Robert B. Whyte, of Ottawa, Canada, president of the Ontario Horticultural Society, on behalf of Canadian fruit growers; George C. Roeding, Fresno, California, speaking for the Pacific Coast; and Col. G. B. Brackett of the United States Department of Agriculture, for the central states. It should be added that the Dominion Department of Agriculture was ably represented by Mr. A. N. McNeill, superintendent of the Division of Fruits. Another feature which will be held in warm remembrance of the visitors was the hospitality of the hosts. The excursions to the Manatee and Bradentown orange and grape fruit growing country proved impressively the citrus and truck growing possibili-

ties and resources of that region; while the excursion to Tarpon Springs, the home of the greatest sponge industry of the world, threw a side light upon another of our many and varied native resources, of which few of the visiting members possessed anything but the most superficial knowledge. Whether the next meeting of the Society will go to Washington, Chicago, or some point on the Pacific Coast is a question to be determined by the executive committee.

TRANSPORTATION QUESTIONS

The importance of the questions raised by Mr. Smith of the Jewell Company Nurseries needs no emphasis, but we take occasion of drawing the attention of the membership of the American Association of Nurserymen to the desirability of interesting themselves in the matter sufficiently early to head off, if necessary, a tendency which later on will be very difficult to influence by any method which may be applied. The Association has done good work in the past in reference to transportation work, but this is one of those lines which demands more or less perpetual effort. Rates are constantly subject to change, and the industry which will stand the increase will usually get it. In other words, the industry whose interests are not jealously guarded is likely to bear the burden. Vigilance, therefore, is demanded, and is rewarded as in most other cases. The committee on transportation should feel that notice has been served on them to look into the matter, and members generally should feel ready to be called upon to lend a hand, when they can help.

NURSERY SPRAYERS

Rather diligent search has failed to discover a really satisfactory outfit for spraying nursery stock. Several nurserymen have devised machines which meet their particular conditions fairly well, but a canvass of the situation does not show that any special type has been evolved to meet the needs of nurserymen as a whole, unless it is the Ilgenfritz machine figured in the frontispiece. Surely there is sufficient demand for a good nursery spray rig to warrant manufacturers meeting it. If there is not, it is a reflection on the plant grower; or possibly it means that the nurseryman's inventive ability is equal to the occasion, and that he is able to devise modifications of existing outfits to meet his own requirements. One nurseryman, however, says that "We think there should be a sprayer made which could be used in nursery work, not only in the small sized trees, but for those running from five to six feet in height; but so far as we know there is nothing on the market."

BOONVILLE, MO.

On April 1st, the Boonville Nurseries of Boonville, Mo., takes in John A. Peyton of Louisiana, Mo., who has grown up from childhood in one of the largest nurseries in the world, as business partner. They are increasing their propagation and business facilities for handling more business in both retail and wholesale departments. They will grow a general line of stock, making commercial varieties of fruit trees their specialty.

NATIONAL FLOWER SHOW

Final arrangements for the forthcoming Second National Flower Show to be held in Mechanics Building, Boston, March 25th to April 1st, are assuming a very satisfactory aspect, and the new schedule is out and will be forwarded immediately to all parties interested.

Almost all the prominent men in the trade have already secured space, and the interest shown in New England and all over the country is very great.

A number of very interesting exhibits are coming from foreign countries, and letters received by the management display considerable enthusiasm and a record-breaking attendance is assured.

No dealer can really afford to miss exhibiting in this show as such an opportunity to present their products to the public was never before offered to the florist trade. A special point is being made to reach the estate owners in New England and from present indications many will attend. This will enable the exhibitors of ornamental plants an excellent opportunity of disposing of their exhibits after the show is over.

DRAINAGE IN RELATION TO FRUIT CULTURE

An interesting address presented at the recent meeting of the New York State Fruit Growers was that of Prof. E. O. Fippin of Cornell on the above subject. He said that not over ten per cent. of the orchards of New York State are not injured by excess of water. Orchardists frequently spend time and money on fertilizers and irrigation, when a proper system of drainage would solve their problem; for drainage allows the fertilizer applied to be more effective, thus requiring a smaller amount, and it equalizes the water in the soil at different seasons, largely doing away with the necessity for irrigation. Further, with the soil in a good sanitary condition, the trees will be stronger and better able to resist insect enemies. Professor Fippin said that a lateral tile drainage system which can be installed for sixty cents a rod, should be laid three feet deep in ordinary clay loam, and three and one-half to four feet in sandy loam. With the land thus drained you can get moisture by cultivation and the earth mulch.

NURSERY SPRAY RIGS

We have been experimenting with sprayers for the past six years and from year to year have improved our methods of spraying so that as far as we know, we feel satisfied that we have the best and most practical spraying outfit used in the nursery business. We think it by far the most economical. Our sprayers are run by sprocket chains and we are able, from the time we start the machine, to keep up a steady pressure ranging from 110 to 125 lbs. to the square inch, using 40 nozzels. We spray four rows at a time, doing the work perfectly. When spraying, we use from 60 to 80 bbls. of fluid per day.

These machines are assembled by us, and although we do not make a regular business of manufacturing them, we have already built several for parties who have seen them. (See frontispiece.)

I. E. ILGENFRITZ' SONS CO.,

By T. J. J.

MOST EXPENSIVE CORN IN AMERICA

How would you like to eat cornbread made from corn that cost \$35 per ear? That would be almost like biting into gold dollars and has 45-cent eggs and 40-cent butter beaten forty ways from Sunday.

W. N. Scarff, well known nurseryman of New Carlisle, has ten ears of the most expensive corn ever sold in the United States. While attending the National Corn Show at Columbus, this week, he purchased the ten ears of Johnston County White Corn, which won first premium in grand sweepstakes, over all varieties of corn represented at the show. They are regarded as the finest ears of corn ever raised in America. For them, Mr. Scarff paid the handsome sum of \$350, or \$35 per ear.

The corn in question was exhibited at the show by Roy D. Clore, of Franklin, Ind. Mr. Scarff proposes to make a specialty of the corn and will see to it that every grain is planted this spring and the harvest will be carefully guarded. —*Springfield Daily News*

TRADE PRICES

ED. NATIONAL NURSERYMAN:

At the annual meeting of this Association held January 12th, 1911, the following resolution was adopted:

"Resolved that the Ornamental Growers' Association protests against the practice of so called trade or other periodicals accepting and printing advertisements of nursery stock with wholesale prices attached, and that the Secretary of this Association is hereby instructed to forward a copy of this resolution to the NATIONAL NURSERYMAN and periodicals carrying nursery advertisements.

C. J. MALOY, Secretary.

Query: Who is the "goat" in this deal?—EDITOR.

Exhibitions

EXHIBITION OF BARLEY AND HOPS

The American Brewers' Association is preparing for an educational exhibit of brewing machinery, material, and products to be held in the Coliseum, Chicago, Oct. 12-22, 1911. The primary object of the exposition and all its branches is said to be education to growers of barley and hops. This exposition will undoubtedly prove of considerable interest.

INTERNATIONAL EXHIBITION

An international horticultural exhibition is now being planned, which will take place in London, May 22, to 30, 1912. As part of this, it is suggested that there be an educational exhibition and conference. In the provisional schedule which has been published there are twelve divisions in 431 classes. The present office of the exhibition committee is 7, Victoria Street, Westminster.

"I am well pleased with the results of my advertisement for the last three months in your paper. I am also a subscriber to the NATIONAL NURSERYMAN, and am much interested in the work you are doing."

CHARLES G. CURTIS, N. Y.

Doings of Societies

SWEET PEAS AT BOSTON

At a meeting of the executive board of the National Sweet Pea Society of America in New York, early in January, it was voted to accept the offer of the National Flower Show Committee to provide \$150 for premiums on sweet peas at the Boston exhibition in March, if the Society would add a like amount to the fund. March 29 will probably be sweet pea day at the show, and the Society will meet in the evening of the same day.

TENNESSEE NURSERYMEN IN SESSION

The sixth annual meeting of the Tennessee State Nurserymen's Association was held in Nashville, January 26, and 27. An excellent program was carried out which included papers by Henry Chase of Huntsville, Alabama, on "Cold Storage of Nursery Stock," by H. Nicholson, Winchester, on "Nursery Management;" R. C. Berckmans, Augusta, Georgia, and A. A. Newson, Knoxville, on "How Foreign Nursery Stock is Grown;" W. H. Stark, Louisiana, Missouri, on "Commercial Apple Growing from a Nurseryman's Standpoint;" and Peter Gettys, Knoxville, on "Ornamental Nursery Stock." The officers of the association are: A. I. Smith, Knoxville, president; J. Marvin Miller, Winchester, vice-president; G. M. Bentley, State University, Knoxville, secretary-treasurer.



G. M. BENTLEY
Secretary Tennessee Nurserymen

MR. HEIKES AGAIN PRESIDENT

At the closing session of the Alabama State Horticultural Society in Birmingham on January 20, Mr. W. F. Heikes, the well known nurseryman of Huntsville, Alabama, was again elected president, and Mr. P. F. Williams of Auburn, who has been the secretary of the Society was also re-elected to that position. In his address President Heikes expressed appreciation for the assistance rendered by the State Department of Agriculture and by the press in forwarding the work of the Society. He called attention to the increased interest in horticulture in the state, fostered to some extent by northern capitalists who have faith in the possibilities of fruit and pecan culture in Alabama.

Membership has more than doubled since the Society's previous meeting, and the attendants at the convention were full of enthusiasm and eager to take part in the discussions. It is interesting to note that several women were present and contributed to the program; also that one

woman was elected a vice-president and another to membership on the executive board. Prominent among the subjects discussed was the growing of peaches and pears. Mr. W. Z. Morris of Lafayette has raised \$800 worth of pears to an acre on high, well drained land. Mr. G. H. Potter of Haleyville in the northern part of the state says that frosts are the worst enemies of the peach, and that fires of old waste wood in the orchard will save the fruit from any frosts that occur in that section. Several valuable papers were presented by members of the state agricultural department.

MIAMI VALLEY NURSERYMEN'S ASSOCIATION

John Siebenthaler was re-elected president, and M. A. Gaines, secretary and treasurer at the annual meeting of this Society, held at the Phillips House on February 9. The business meeting was followed, as usual, by a banquet. The menu was so unique that we take pleasure in reproducing it.

THE MIAMI VALLEY NURSERYMEN'S ASSOCIATION (WHOLESALE ORDER)

DAYTON, Ohio, February 8, 1911.

THE PHILLIPS, Dayton, Ohio:

Gentlemen—Please "dig up" and have properly "heeled" in your Packing House, ready for "billing out" on Thursday evening, February 9, 1911, the following stock, strictly up to grade, true to name, duly inspected and at least "apparently" free from infestations:

BLUE POINTED DAMSONS IN ORIGINAL CASES
Direct from the Aquatic Seed-beds of an eastern grower.

CELERY

CREAM-ATED TOMATO HEALTH DIP
For Spraying the interior of the packing cases.

OLIVES

RADISHES

PLANKED WHITE FISH
Formerly scale infested; now apparently free

BROWN-TAILED TURKEY

Roasted in Fumigator.

CRANBERRY DOPE

ASSORTED PEAS, ALL GREEN

CRUSHED SPUDS

WALDORF SALAD

Thoroughly Aristocratic.

CONGEALED EXTRACT BOVINUS

En-bloc.

CAKES—Mixed Varieties.

COAGULATED LACTEAL FLUID

a la Neufchatel.

COFFEE

The transportation of the above stock will be attended to by the individual packers.

Yours truly,

THE MIAMI VALLEY NURSERYMEN'S ASSOCIATION,
JOHN SIEBENTHALER, President.

M. A. GAINES, Sec'y and Treas.

MONTANA FLORISTS

The latest additions to the membership of the Florists' and Nurserymen's Associations of Montana include Messrs. H. M. Sloan, (Hamilton); S. Hansen, (Butte); J. Hocking and F. Bangert, (Helena), and Sentaor Fred Whiteside, (Kalispell).

Quiz Column

FUNGOUS DISEASES

Is the book you are advertising by B. M. Duggar on fungous Diseases the latest and best thing on the subject? Is it thoroughly up to date on remedial measures?

J. K., Indiana.

ANSWER

The book advertised in the pages of THE NATIONAL NURSERYMAN, under the title of "Fungous Diseases," by Dr. B. M. Duggar, is the latest and best thing on the life histories of the leading diseases of fruits, vegetables, and flowers. It was published some six months ago, and at that time was thoroughly up to date in reference to the latest knowledge on the characteristics, life histories, and treatment of these diseases; but it is to be remembered that the application side of plant pathology is a continually progressive and developing feature, and no book can remain absolutely up-to-date on this unless it is frequently revised. Undoubtedly this volume will be revised before very long. It will, however, stand always as an authority on the characteristic features of the diseases. The grower must keep himself abreast of the latest knowledge on the question of treatment by securing the publications of the experiment stations as they are issued.

TOP-WORKED TREES

Would it pay to offer a line of top-worked apple trees?

What are the points of superiority of top-worked trees over those propagated in the usual manner? Will it affect the color? For instance, we hear of a man who grafted Baldwins on Transcendent Crab, and claims his fruit is redder than common, and a better cropper. What stocks would you recommend for King and Spitzenberg? Would a tall, natural seedling be as desirable as a cultivated variety? We have had inquiries about Ben Davis as a stock for Baldwin.

M. New York.

ANSWER

I am somewhat doubtful that it would pay you to advertise a general line of top-worked trees. There is, however, quite a constant and definite demand for top-worked trees of certain varieties. For instance, I think the King, Spitzenberg, and Boiken apples are much better top-worked than upon their own stocks. On the other hand, I see no advantage in top-working Baldwin, Greening, Spy, McIntosh, Wealthy, Duchess, Alexander, Sutton, or Hubbardston.

My own notion is that top-working should be regarded as a special means of attaining certain results. In the King apple we desire a stock not subject to collar rot. In some other varieties, as Twenty-Ounce and Maiden Blush, we desire stocks more or less immune to canker, and stocks which will instil greater vigor into the variety. In the case of Boiken, we desire a stock which will produce a better root system than the Boiken ordinarily possesses. Aside from these points where a stock is used to secure some special feature. I am not in favor of top-working as a general practice. It

is said that top-working hastens and increases fruitfulness. I am not sure that this general statement will hold. I do not think we can count on topworking as a means of affecting the color. I believe, however, that the hardiness of the variety, that is, its power to resist cold, may be slightly influenced by working it on a strictly hardy stock. I have seen cases where the color and quality of the fruit were apparently influenced by the stock. The unfortunate thing about this is that you probably could not count on the same result occurring every time. In other words, these effects on color and quality are occasional and not constant.

In top-working King and Spitzenberg, you should use large, long-lived trees. Duchess and Wealthy, for instance, would not be adapted. They represent an entirely different type of tree and the top would outgrow the stock in a few years. I do not know of anything better for King and Spitzenberg than Baldwin, Spy, and perhaps Bottle Greening.

In the case of using seedlings for top-grafting stock, you would be sure to get a good deal of variation in your stock, and this would eliminate the feature of uniformity. I would not use Ben Davis on which to topwork Baldwin, because I am quite convinced that the latter would overtop the Ben Davis stock before maturity had been reached.

I would repeat then that I believe that there is a market for a limited quantity of top-worked stock of certain varieties such as I have named above; and that it would be a desirable departure, and I have no doubt would meet with success if properly advertised; but on the other hand, I see no reason for engaging in a general top-working campaign for varieties which are fairly satisfactory on their own stocks.

J. C.

DOWNING'S FRUIT BOOKS

Could you please tell me where I could get Downing's books on Horticulture, especially his descriptive book on all kinds of trees, Plants and Ornamentals?

GEO. B.

ANSWER

Downing's horticultural works have long since gone out of print. His "Fruits and Fruit Trees of America," which you specially refer to has gone through fifteen or sixteen editions and was published in a revised form by his brother, Charles Downing, some twenty-five years ago. The only way in which you could secure a copy of this at the present time is through the good offices of some second-hand book dealer. You might write to E. B. Skinner & Co., or J. McDonough of Albany, N. Y., who make something of a specialty of horticultural books. Downing's "Landscape Gardening" is much more difficult to obtain than his fruit book, and I doubt whether it will be possible at the present time to pick up a copy without a great deal of labor. If you want something on ornamental trees and plants, I would advise you to buy Kemp's "How to Make a Garden," recently revised by Waugh, and published by John Wiley & Son, New York.

J. C.

REPORT OF THE FOURTH ANNUAL MEETING OF THE OHIO STATE NURSERYMEN'S ASSOCIATION

The fourth annual meeting of the Ohio Nurserymen's Association met at Columbus, Jan. 10, 1911. The attendance was fully up to that of former meetings and interest in the society seemed in no way to wane.

At the opening session, we had a fine address from President J. W. McNary, also a paper by W. N. Scarff, on the value of barn yard manure in small fruit growing, on which we cannot do justice here, and trust we may arrange for their publication later.

T. J. Dinsmore read a paper on "Root Gall or Hairy Knot," giving a report of the action of the national association at their last meeting, and the efforts made to conduct experiments with trees affected with root-gall. The prevailing opinion among our nurserymen is that root-gall does not materially affect the health, longevity, or fruitfulness of the apple tree, and that the laws and the attitude of the inspectors are unnecessarily severe in dealing with this trouble.

Sometime before the date of our meeting, the Department of Agriculture sent out a circular letter to the nurserymen of the state, stating that the department needed more funds to carry on the work of inspection, and suggesting a special tax on nurserymen and dealers for this purpose. Mr. A. P. Sandles, secretary of the State Board of Agriculture, was at the nurserymen's meeting and presented the matter on the part of the State Board. The association strenuously opposed such a special tax, on the grounds that inspection is authorized by law, created by and for the public, and that the public ought to pay for it; that the loss from insect pests and the resulting need of inspection is largely due to the surroundings, which the inspection department is doing little, if anything, to remedy. With the improved methods of treating nursery stock by spraying and fumigating, the fruit grower has little reason to fear infestation from nursery stock, but the nurseryman has in many cases suffered severe loss by infestation from infested orchards. Any tax on nurserymen not shared equally by the fruit grower would appear unfair and unjust.

As it appeared probable that an attempt would be made to authorize by law a special tax or inspection fee on nurserymen, a legislative committee was appointed to harmonize matters as far as possible and to correct some features in the old inspection law, not adapted to present conditions. A legislative committee was secured, consisting of three nurserymen appointed by the association, and three horticulturists, appointed by the State Horticultural Society, to draft the changes proposed. The committee has had several meetings, and the proposed changes have been drafted with some prospect that they may be submitted to the present legislature for passage.

At the evening session, the nurserymen and their friends were favored with an hour's entertainment by a reader secured for the occasion, also by appropriate selections read by President J. W. McNary and by the son of John Sieben-thaler, who is attending the State University.

The association feels that, at the passing of its fourth

annual meeting with increased attendance and interest, the future of the association is assured.

The officers of the association were re-elected as follows: President, J. W. McNary, Dayton, O.; secretary, W. B. Cole, Painesville, O.; treasurer, W. N. Scarff, New Carlisle, Ohio.

W. B. COLE, Secretary.

GRIFFING BROS. EXPAND

ED. NATIONAL NURSERYMAN:

We have increased our nursery business, taking on nurseries at Port Arthur and McAllen, Texas, also at Miami, Fla. It is our intention to grow one of the most complete lines of stock ever offered in the South, covering the entire South from extreme South Florida to the Rio Grande River. Our line of trees is peculiar to the South, and such as many nurseries doing some business in the South have occasion to need every season. We have built up a fine line of business in the wholesale way, furnishing trees to nurseries in the Central North and North West, to meet the requirement of their southern orders.

The general sales office of the Company will remain at Jacksonville, Fla., but branch sales offices will be maintained at McAllen and Port Arthur, Texas, also Miami, Fla. Jacksonville, Fla.

THE GRIFFING BROS. CO.,
C. M. GRIFFING, Secy.

GROWING OF SUMMER APPLES

J. A. ARNOLD.

On nearly every farm summer apples have had a place since very early days, and varieties have been developed extending the season of apple production over the entire summer, as well as autumn. While as a rule this fruit has been grown for family consumption, the surplus has found its way to market. The marked decline in the production of peaches within the past few years has brought about a considerable extension of the early-apple industry on a commercial scale, which extension has been most marked in the Middle Atlantic States, where especially advantageous transportation routes, both rail and water, and the proximity of large markets have stimulated the enterprise, which has its center in the truck-producing region near Philadelphia. The U. S. Department of Agriculture, as a result of this extension, has made a study of the early-apple industry, with the Middle Atlantic States as a field, and published the information collected in a bulletin entitled "Summer Apples in the Middle Atlantic States," issued by the Bureau of Plant Industry. This bulletin is a compendium of information covering all phases of the question of early-apple production, including soils, climate culture, picking, packing, marketing, etc. Numerous varieties are described, and seasons and other data conveniently presented in tabular form.

At the annual meeting of the Ga. State Horticultural Society at Thomasville, Ga., R. C. Berckmans, son of the late P. J. Berckmans the only president the society has had since its organization in 1876, was elected president of the organization.

Obituary

WM. CUTTER

At Palisade, Colo., on Dec. 30, in the eighty-fifth year of his age. Mr. Cutter was born in New Jersey and came to Colorado by way of Illinois and Kansas. He established a nursery business in conjunction with his son, John H., planted a peach orchard and identified himself with fruit interests generally. He is survived by two sons and two daughters.

SAMUEL C. MOON

A TRIBUTE TO A PLANT LOVER

A born nurseryman, he was devoted to his profession and on his lawns is one of the finest collections of rare trees and shrubs to be found in this country, among them being the largest and finest purple beech in America. His great love for nature, his keen observation, combined with his close personal work among trees, made him a recognized botanical authority.

He was a naturalist of renown, being one of the foremost members of the Delaware Valley Naturalists Union, President of the Bucks County Natural Science Club, and President of the Pennsylvania Nurserymen's Association, at the annual meeting of which he was scheduled to preside the week following his death.

As a member of the Society of Friends, he was prominent and held several offices of responsibility in that organization.

Shortly before his death a business acquaintance said of him: "He is a man of affairs, a man among men, yet he seems more fond of his family, his home, and his trees than of money or fame."



SAM'L C. MOON

FRANKLIN P. PHOENIX

As we go to press, newspaper dispatches announce the death of the pioneer nurseryman of the Middle West, Franklin P. Phoenix, of Delevan, Wisconsin, at the age of eighty-six. He was a New Yorker by birth, but moved West at an early age, establishing a nursery business in Bloomington, Illinois, in 1855. He continued here for a number of years, conducting a large business, but moved to Delevan in 1878.

The booklet *Just Bays* issued by McHutchison & Co., of 17 Murray St., New York, should be of most valuable service to all nurserymen using Bay Trees. It illustrates the different commercial shapes, etc., and not specifying prices is of great help and benefit in soliciting orders.

This firm has made a specialty of Bay Trees for a number of years and by carefully studying their customers' interests have built up a very large business in this line, shipping many carloads every season to the most reliable firms throughout the United States. Their representative visiting Europe every year insures personal attention and universal satisfaction in the filling of all orders.

Our Book Table

PLANT BREEDING. By Hugo DeVries. Published by the Open Court Publishing Company, Chicago. 5½x6¾. 360 pp., illst. Price \$1.50 net.

The author of the mutation theory is probably as well known in America as in Europe, for it was in America that a full exposition of his mutation theory was elaborated, during the course of a series of lectures given at the University of California some four years ago. The work under consideration includes a discussion of evolution and mutation, the discovery of the elementary species by Nilsson, chapters on corn breeding, the production of horticultural novelties by Luther Burbank, the association of characters in plant breeding, and finally a chapter on the geographical distribution of plants.

The volume is exceedingly valuable, first, on account of the emphasis laid upon the appearance of new forms of plants by rising suddenly instead of by gradual development of parts over a long series of years, and second, by reason of the emphasis laid upon the fact of the existence of elementary species which, when isolated and self bred, reproduce true to their individual types. In addition to these important principles the general discussion of methods of plant breeding is most valuable. The whole subject of the improvement of plants is placed upon a new and eminently practical basis, and plantsmen, in whatever lines they may be interested, cannot afford to be without this book, which will be of great assistance in promoting and advancing the lines of work in which they are severally interested.

ORNAMENTAL SHRUBS OF THE UNITED STATES, by Austin Craig Apgar. Published by the American Book Company. Illustrated 5x7½. 352 pages. Price,

We find in this volume divided into three groups of matter: Part I, Leaves, Flowers and Fruit; Part II, Keys to the Genera; Part III, Description of the Shrubs. On nearly every page there is at least one illustration, including generally a separate drawing of a leaf; for, as the author tells us, to successfully use the book, it is "necessary to learn what constitutes a leaf of a plant." These illustrations, of which there are over six hundred, were made in nearly all cases from nature. Perhaps the chief point of interest is Part II, containing the keys, which are based entirely on the leaf form, and which are twelve in number. In Part III, practically all plants have been given common names; for, to quote from the preface, "This book is intended to be used by that large public who wish to know by name the attractive shrubs cultivated in parks and private grounds, but who are actually afraid of anything called botany."

WHO'S WHO AMONG THE FERNS, by W. I. Beecroft. Published by Moffat, Yard and Company, New York, 1910. Illustrated. 4¼x7. 208 pages.

This little volume, of convenient pocket size, is intended for the untechnical lover of ferns, and follows the same plan essentially as "Who's Who Among the Wild Flowers," by Mr. Beecroft. One charming feature in connection with the illustrations is an occasional glimpse into the woodland home of a fern. To the person unversed in fern-lore, the book will reveal an astonishingly large number of varieties, yet each is pictured so accurately that there ought to be little trouble in identifying an unknown specimen.

THE BOOK OF FRIENDSHIP. (Macmillan, \$1.25 net) with an introduction by Samuel McChord Crothers and Drawings by Wladyslaw Benda.

This book contains the things which seven learned men have said about friendship.

A. Mitiny says: "Our 1,110,000 Giant Himalaya Plants have been sold since October 1st, 1910."

Legislation

A CURIOSITY IN THE WAY OF NURSERY LEGISLATION

ED. NATIONAL NURSERYMAN:

Sir: Inclosed please find copy of Senate Bill No. 19 by the Honorable Geo. Kelley of Ogden. While intrinsically this bill is not worth the space in any paper, I would like to see it printed in the next issue of the NATIONAL NURSERYMAN as a curiosity, and to show how far prejudice may go in interfering with the right of free and unhampered contract, the laws of interstate commerce, and the right of the American citizen to engage in a legitimate business with the untrammelled right to dispose of his product on the open market.

Roy, Utah.

DAVIS CO. NURSERIES.

A Bill for an Act prohibiting the sale or disposal of fruit trees that are not true to name and kind represented. Providing for dealers in fruit trees filing a bond with Secretary of State to indemnify purchasers and providing a penalty for violation of this Act.

SECTION 1. It shall be unlawful for any person, firm, company, corporation or association, to sell, solicit or obtain orders for the sale of fruit trees in the State of Utah, which shall be different in name or kind from the fruit trees ordered or sold.

SEC. 2. It shall be unlawful for any person, firm, company, corporation or association, as principal, broker or agent, to sell, solicit or obtain orders for the sale of Fruit Trees in the State of Utah without first executing and filing with the Secretary of State of the State of Utah, a good and sufficient bond in the penal sum of \$10,000.00, to be approved by said Secretary of State and which said bond shall be conditioned, that the fruit trees, so sold, ordered, or solicited, shall be true to the name and of the kind represented or ordered.

SEC. 3. Any person damaged by reason of a violation of the provisions of this act may bring an action upon the said bond and judgment shall be entered against the sureties thereon for such amount of damages as such person shall have sustained.

SEC. 4. The statutes of limitation shall not commence to run as to such action or any prosecution under this act until discovery that such fruit trees are different in name and kind from that sold or represented.

SEC. 5. Any person, firm, company, corporation or association violating any of the provisions of this act shall be deemed guilty of a misdemeanor.

INSPECTION OF IMPORTED NURSERY STOCK

Bill No. 326, known as the Simmons bill, providing for the inspection of seeds, tubers, bulbs, and nursery stock against injurious insects and diseases under authority of the Secretary of Agriculture, was reported out of committee last week. Section 8, which gives the Secretary authority to quarantine importations from foreign countries infested by any seriously injurious insect, has been questioned as to its feasibility. The committee has recommended the passage of the bill, and it will be called up in the House for consideration before very long.

Mr. Pitkin has the following to say on this bill:

ED. NATIONAL NURSERYMAN:

Sir:—Relative to the federal inspection bill known as the Simmons Bill, now in the House of Representatives, the

best information in the hands of the Legislative Committee is that it will not be possible to secure the passage of this bill during the present short session of Congress ending March 4.

The Committee, therefore, feels that no action will be taken on the bill during the present session.

Rochester, N. Y.

WM. PITKIN,

Chairman, Com. on Legislation, Am. Assoc. of Nurserymen.

HOW THE NURSERYMAN MAY BE AFFECTED BY RECIPROCITY

ED. NATIONAL NURSERYMAN:

I find in looking over the bill now in Congress covering the proposed reciprocity arrangement with Canada, that it contains a few items of interest to the nursery trade.

It provides, 1. That the duties on "Grape Vines, Gooseberry, Raspberry, and Currant Bushes" shipped from the United States to Canada shall be reduced from 20% to 17½%, and that the duty on the same articles shipped from Canada into the United States shall be reduced from 25% to 17½%, and, 2d, That the duties on "trees, Apple, Cherry, Peach, Pear, Plum, and Quince, and small Peach trees known as June buds" shipped from United States into Canada shall be reduced from 3c per tree to 2½c per tree.

Almost every man's views on the tariff are affected by his pocketbook, so that the Legislative Committee is unable to determine what action, if any, would be agreeable to the majority of the members of the Association.

This information is submitted to the Association, and if any member has any strong views or arguments to present to the Legislative Committee, the chairman would be glad to receive them.

WM. PITKIN,

Chairman Legislative Com.

GENEVA, N. Y.

The H. E. Merrell Nursery Co. was recently incorporated in Geneva, N. Y., with a capital stock of \$40,000. The incorporators, H. E. Merrell and E. H. Merrell of New York City and H. L. King of Geneva, will conduct a general nursery and fruit business.

THE NATIONAL NURSERYMAN,

We enclose our check for \$1.00 for renewal to The National Nurseryman for one year. This Journal certainly does meet with our approval and we do not wish to be without it.

Yours very truly,

THE FARMERS NURSERY CO.—OHIO

NATIONAL NURSERYMAN:

I have mailed Catalogue of the Wrapper to The Riverside Nurseries, as per their letter you enclosed to me. Thanks for your kindness. Yes, it pays to advertise in the NATIONAL NURSERYMAN.
Missouri. HOMER L. REED.

Find inclosed \$1.00, to pay our subscription. We have no intention of doing without such a valuable journal, so long as we are in the nursery business.

An abundant crop of apples for Utah, 1911, if frost is kept off. Trees are full of healthy bloom buds now.

Yours truly,

B. H. BOWER.

OUR COMMERCE

TRADE OF THE UNITED STATES WITH ITS NONCONTIGUOUS TERRITORIES, 1910

Trade of the United States with its noncontiguous territories aggregated two hundred million dollars in the calendar year, 1910, against one hundred million in the calendar year, 1903, the first year for which complete statistics of this trade are available. The figures of the Bureau of Statistics, Department of Commerce and Labor, just completed, show the total value of this trade in the year ending December 31, 1910, to be \$202,494,343, and in the year ending December 31, 1903, \$100,107,234, an increase of 100%, while the trade with other parts of the world was increasing about 40%. The territories in question are Alaska, Hawaii, Porto Rico, the Philippines, Guam, Tutuila and the Midway Islands.

The value of the merchandise shipped from the territories in question to the United States in 1910 was \$111,731,031, against \$61,876,756 in 1903. The value of the merchandise shipped from the United States to the noncontiguous territories was \$90,763,312, against \$38,230,478 in 1903. The increase in the period from 1903 to 1910 was thus 82% in the value of merchandise shipped from the territories in question to the United States; and 139% in the value of merchandise shipped from the United States to those territories.

The above figures do not include movements of gold and silver. The value of domestic gold shipped from Alaska to the United States in 1910 was in round terms 15 million dollars, and of foreign gold (presumably from British territory adjacent to Alaska) approximately 3½ million dollars; while the value of domestic gold shipped from Hawaii to the United States in 1910 was about one-half million dollars.

The principal articles forming this trade of more than 200 million dollars between the United States and its noncontiguous territories are in general terms tropical products sent from those islands to the United States, and fish, copper, and furs from Alaska, while of shipments from the United States to these territories manufactures and foodstuffs are the principal articles. Sugar and hemp are the principal articles coming from the Philippines, and as already indicated, fish, copper, and furs are the principal articles coming from Alaska. The quantity of sugar sent from Hawaii to the United States in the calendar year 1910, was a little over one billion pounds, valued at 39½ million dollars; from Porto Rico, 626 million pounds, valued at 26 million dollars; and from the Philippines, 218 million pounds, valued at 6½ million dollars. Tobacco is also an article of some importance in the shipments of merchandise from the tropical islands to the United States, amounting to 1½ million dollars of unmanufactured tobacco and a little less than five million dollars in value of cigars from Porto Rico; a little less than two million dollars worth of cigars, cigarettes and cheroots from the Philippines, and about nine thousand dollars worth of tobacco from the Hawaiian Islands. Manila hemp from the Philippines in 1910 amounted to about 8½ million dollars in value. Fruits and nuts (chiefly fruits) from Hawaii amounted to 2½ million dollars in value; from Porto Rico a little less than two million; and from the Philippines the shipments under this general head (chiefly cocoanut meat, broken, or "copra") amounted to a little over one-half million dollars.

From Alaska the principal articles shipped to the United States were fish, chiefly salmon to the value of 11½ million dollars; furs, about one-half million; copper ore about one-fourth million.

The principal articles shipped to the territories in question, are, as already indicated, manufactures and foodstuffs. To Hawaii the group "Cars, carriages, etc." amounts to about one million dollars, of which about three-fourths is automobiles; cotton manufactures, nearly two million dollars; iron and steel manufactures, 3¾ million; leather and manufactures thereof, more than one-half million; mineral oils, 1½ million; paper, and manufactures thereof one-half million; tobacco manufactures, one-half million; manufactures of wood (chiefly lumber) 1½ million; breadstuffs, 1¾ million, and meats, three-fourths of a million.

To Porto Rico the principal articles were cars and carriages, one

million dollars in value, of which automobiles formed a little more than one-third; cotton manufactures, 4½ million; iron and steel manufactures, 4½ million; leather and manufactures thereof, over one million; mineral oils, one-half million; paper and manufactures thereof, over one-half million; soaps, nearly one-half million; manufactures of silk, one-third of a million; manufactures of wood, 1¾ million; breadstuffs, practically six million dollars, and meats, 3¼ million.

To the Philippines the principal articles shipped were cars and carriages over one-half million dollars in value, of which more than two-thirds was automobiles; cotton manufactures, 4½ million; against 1½ million in 1909; manufactures of iron and steel, four million; leather and manufactures thereof, nearly one million; paper and manufactures thereof, more than one-half million; manufactures of wood (chiefly lumber) over one-half million; mineral oils over a million; breadstuffs, 1¼ million, and meats one-half million.

To Alaska the principal articles shipped were iron and steel manufactures, 4¼ million dollars in value; wood and manufactures thereof, three-fourths of a million; mineral oils three-fourths of a million; tobacco, one-half million; vegetables, one-half million; woolen manufactures over one-half million; cotton manufactures, over one-half million; explosives, nearly one-half millions; eggs nearly one-half millions; breadstuffs, three-quarters million, and meat and dairy products, over two million dollars in value.

THE NATIONAL NURSERYMAN PUB. CO.

We enclose remittance amounting to \$1.00 to renew our subscription for the coming year. This is a journal that find indispensable in our business.

THE NATIONAL NURSERIES,
Kansas.

THE NATIONAL NURSERYMAN:

Enclosed find \$1.00. We could not possibly do without the NATIONAL NURSERYMAN.
Mont. JAMES P. CALLAHAN.

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Several thousand extra fine trees, 2-inch caliper.

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Strawberry Plants

guaranteed as good as grows, at \$1.00 per 1,000 and up.

Catalogue Free.

ALLEN BROS., Paw Paw, Mich.

MOST EVERYONE HAS A HOBBY

Ours is propagating new varieties of Strawberries

After a thorough testing and found to be an all around, best of all, you hear us warble. Otherwise we bury them. Our catalogue for 1911 is brimful of new ones and conspicuously absent of varieties that have been, but can not come back Early, mid-season and late varieties. We were the propagators and introducers of the famous "Stevens Late Champion." A book on Strawberry Culture mailed with every catalogue free for the asking.

J. G. GARRISON & SONS, Bridgeton, N. J.

10,000 or more APPLE SEEDLINGS, 3-16,
and all up, at \$8.00; ready for shipment
at this time. Further orders for spring delivery.

F. H. McFARLAND, Hyde Park, Vermont.

TWO-YEAR OLD CAROLINA POPLARS,

4 feet and up. Also Cuttings by the 1000 or 10,000. Send for price. W. C. BRYANT, Nurseryman, Dansville, N. Y.

AMONG EXPERIMENT STATION WORKERS

VARIETIES OF FRUIT ORIGINATED IN MICHIGAN. Michigan Bulletin 44, 1910.

A somewhat unique bulletin is the above from the pen of S. W. Fletcher, formerly horticulturist to the Michigan Agricultural Experiment Station. This bulletin describes all varieties of fruits of any worth known to have originated in Michigan, and gives the history of the origination of each. The author states that while many are of local value, only four are of general commercial value. These four are the Shiawassee apple, Kalamazoo and Lewis peaches, and Conrath raspberry. Among other important varieties are the King and Woodruff grapes, the Oakland and Papaw apples, and the Dornan strawberry. Among newer varieties not fully tested are the Opalescent apple, Welch and Davidson peaches, and the Pringle plum. The bulletin is well illustrated, and the kind of attractive document that is likely to encourage improvement work of this kind.

Kentucky Bulletin 47, devoted to common insecticides and fungicides, with directions for the treatment of farm pests, by H. Garman, entomologist and botanist. An excellent bulletin of present day importance.

U. S. Dept. of Agriculture, Forest Service Circular 179. A study of the Eucalyptus in California, including its adaptation to that climate, characteristics of the wood, building value, and so forth. On the whole, while the actual knowledge of the possibilities of utilizing California-grown eucalyptus is meagre, it is sufficiently suggestive to invite speculative experiments.

U. S. Dept. of Agriculture, Bul. No. 36, Biological Survey. Raising Deer and Other Large Game Animals in the United States. This bulletin presents an illuminating discussion on the characteristics of the larger game animals of the United States, and gives some interesting experiments in the breeding of the common deer. It is a timely publication, drawing attention in a commonsense way to a question which has important practical bearing on agricultural operations, especially in New England, and throughout the Appalachian region.

BERBERRY THUNBERGI, transplanted, 1 to 1 1-2 and 2 ft.
PHLOX, mixed colors, transplanted, cheap, Red, White, Blue, Pink.

CALIFORNIA PRIVET, strong 1 year, 2 to 2 1-2 feet.

LOMBARDY and CAROLINA POPLARS, fine, 8, 9, 10, 12 ft.

JOSIAH A. ROBERTS, Malvern, Pa.

Peach Trees and Strawberry Plants

all leading market sorts for Fall 1910 and Spring 1911

MYERS & SON, Bridgeville, Del.

TREES as fine as ever grew. Prices that sell them. Apple, Pear and Peach at

SUNNY SLOPE NURSERY
HANNIBAL, MO.

Trees for Sale

PLUMS, CHERRIES, PEARS, BUDDED QUINCE and
ANGERS QTINCE, 2 years old.

PATRICK O'HARA, Dansville, N. Y.

For Spring Lining-out THE GRIFFING NURSERIES

Offer for March and April Shipment

Satsuma and other Hardy Oranges. Grape Fruit and Kumquats on Citrus Trifoliata Roots. Biota Aurea Nana and other Conifers grown from cuttings.

20,000 Chinese Arborvitea Seedlings from 6 to 18-inch size. Handsome stock, low prices, samples on request.

Also a varied line of Budded Pecans, Japanese Persimmons, Figs, Muscadine Grape, Fruit Trees, Ornamental Trees and Shrubbery. Address General Sales Office,

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JACKSONVILLE, FLA.

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MACCLENNY, FLORIDA

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25,000 Cumberland Raspberry

Fair stock of all kinds of small fruits.

W. B. COLE, Painesville, O.

WANTED Position by an experienced correspondent, familiar with handling agents, collections and all details of the retail nursery business. Address

"Correspondent," care this paper.

10,000 Clematis Paniculata and Ampelopsis Veitchii for billing out. 2-year old.

200,000 California Privet, 2-year, 18 in. to 4 ft.

200,000 2-yr. Asparagus Roots. Must be sold. Get prices.

BENJ. CONNELL,
Merchantville, N. J.

Ornamental Trees, Shrubs, Perennials and Evergreens

We have an especially fine line in the following trees.

Box Elder	Carolina Poplar	Silver Maple
Green Ash	Tulip Poplar	Sugar Maple

Our shrubs of the following will be sure to please:

Pussy Willow	Spiraea Van Houttei	Japan Quince
African Tamarax	Syringa (Mock Orange)	Indian Currant

We have dozens of other sorts of both trees and shrubs. We mention these only. In vines we have a No. 1 stock of

Chinese Trailing Honey Suckle	Chi. White Wistaria	Am. Ivy
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Thousands of Dahlias and Cannas, Iris, Phlox, etc.

Our line is complete and the quality is all that could be desired. We make the right kind of prices too.

Besides our line of nursery-grown stock, we have a chain of collectors that can get almost any native tree, shrub, perennial bulb, fern or orchid. Last year we supplied our customers with over half million perennials alone, and several car loads of large ornamentals. We pleased them—We can please you. Let us quote on your wants.

HOPEDALE NURSERIES, Hopedale, Ill. (Wholesale Dept.)

Catalogues Received

The Farmers' Nursery Co. Troy, Ohio. Wholesale Trade List.
T. S. Hubbard Company. Fredonia, N. Y. Wholesale Price List.

Peter Schott. Knittlesheim, Germany. Trade List.

F. & F. Nurseries, Springfield, N. J. Trade List.

Forest Nursery & Seed Company. McMinnville, Tenn.

I. E. Ilgenfritz's Sons Co. Monroe, Mich. Surplus List No. 2.

J. G. Harrison & Sons. Berlin, Md. Wholesale Price List.

R. Douglas Sons. Waukegan, Ills. Wholesale Price List.

D. Hill, Dundee, Ills. Wholesale Catalogue.

F. H. Stannard & Co. Ottawa, Kans. Wholesale Trade List.

Biltmore Nursery. Biltmore, N. C. 12th Edition of wholesale trade list.

E. W. Wooster. Ellsworth, Maine, R. F. D. No. 4. 1911 Price List.

Bay State Nurseries. N. Abington, Mass. Wholesale price list of Trees, Shrubs, Evergreens, Vines, Roses, and Herbaceous Perennials.

McKay Nursery Co. Pardceville, Wis. Catalogue of Hardy Nursery Stock.

Rockmont Nursery. Boulder, Colo. General Catalogue. Real attractive cover, in sepia.

Thos. Meehan & Sons. Dresher, Penna. Trade List.

Peter Henderson & Co. Cortlandt St., N. Y. Farmers' Manual.

Willadean Nurseries. Sparta, Ky. Wholesale price list.

J. Jenkins & Son. Winona, Ohio. Wholesale price list of surplus stock.

The Wm. H. Moon Co. Morrisville, Penna. Catalogue of hardy trees and plants for every place and purpose.

Oscar H. Will & Co. Bismarck, N. D. 28th Annual Catalogue.

McHutchison & Co. 17 Murray St., N. Y. City. "Just Bays."

John A. Young & Sons. Greensboro, N. C. Descriptive catalogue of Southern and acclimated fruit trees, Vines, Plants, etc.

W. B. Cole. Painesville, Ohio. Price list to the trade.

Geo. S. Josselyn. Fredonia, N. Y. Wholesale catalogue of American Grape Vines.

C. M. Hobbs & Sons. Bridgeport, Ind. Semi-annual Wholesale price list.

The Storrs & Harrison Company, Painesville, Ohio. Spring Catalogue No. 2.

The Morris Nursery Co. West Chester, Penn. Trade List for Spring, 1911.

Mount Arbor Nurseries, Shenandoah, Ia. Wholesale Trade List.

M. Crawford Company, Cuyahoga Falls, Ohio. Catalogue of Strawberry Plants, and other small fruits, etc.

Charles G. Curtis, Callicoon, N. Y. Wholesale Price List for Rhododendron Maximum, Kalmia Latifolia, Azalea Nudiflora Hemlocks, Pines and Ferns.

Brown Bros. Co., Rochester, N. Y. Wholesale Trade List.

Southern Nursery Co., Winchester, Tenn. Surplus List No. 4.

Mount Arbor Nurseries, Shenandoah, Iowa. Wholesale trade list, spring of 1911, of general nursery stock.

The Elm City Nursery Co., New Haven, Conn. General descriptive price list of deciduous trees, evergreen trees, hardy vines, hardy roses, fruit trees, etc.

Fraser Nursery Co., Huntsville, Ala. Surplus list, February 1st, 1911, for nurserymen and dealers only.

Woodlawn Nurseries, Rochester, N. Y. Catalogue of fruit trees, small fruits, ornamental trees, etc.

W. P. Rupert & Son, Seneca, N. Y. Price list of fruit trees, ornamentals, etc. Bartlett pears a specialty.

Lewis Roesch & Son, Fredonia, N. Y. Descriptive catalogue of grape vines, fruit trees, small fruits, vines, shrubs, etc.

Samuel Cooper, Delevan, N. Y. Price list of strawberry plants.

Knight & Bostwick, Newark, N. Y. Post card describing nursery stock.

Stark Brothers Nurseries & Orchards Co., Louisiana, Mo. Bulletin No. 71. Mail order price list for spring, 1911.

Huntsville Wholesale Nurseries, Huntsville, Ala. Wholesale price list, February, 1911.

PENNSYLVANIA NURSERY CO.

Girard, Erie Co., Pa.

GROWERS OF A COMPLETE GENERAL LINE.

SPECIALTIES: Peach, Cherry, Plum, Currants, Grapes, Hedging, Ornamentals, Shrubs—some extra large. Plum Farmer Raspberry. Send us your want and surplus lists.

5,000 Deutzia, Pride of Rochester,
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Good stock of other shrubs.

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Offer for Fall 1910 and Spring 1911

PEACH TREES—fine assortment.

PEAR TREES—2 yr. unexcelled.

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CALIFORNIA PRIVET, 1 yr., fine plants.

NATURAL PEACH PITS—crops 1909 and 1910.

100,000 PEACH SEEDLINGS from buds for lining out

General line of Nursery Stock

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HIGH GRADE FRUIT AND ORNAMENTAL
TREES, SHRUBS, ROSES AND
HERBACEOUS PERENNIALS

We grow everything required for Orchard Garden,
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Catalog and Trade-list on application.



Partial View of Persimmon Trees in Nursery,
shown in our Retail Catalogue, page 23.

PERSIMMONS PRIVETS ARBOR VITAE

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True to Name

Your trade will be quick to see the value of Glen Saint Mary stock—our methods of propagating assure quality and satisfactory results, and much of our product will succeed practically all over the North. Let us know your wants—we'll gladly supply prices and particulars on request.

GLEN SAINT MARY NURSERIES CO.
Dept. 3, Glen Saint Mary, Florida

Willett & Wheelock; North Collins, N. Y. Wholesale price list, 1911, of small fruits.

Rich Land Nurseries, Rochester, N. Y. 1911 catalogue of reliable fruit and ornamental trees, roses, shrubs, etc.

Vaughan's Seed Store, 25 Barclay St., New York. Large illustrated catalogue of flower and vegetable seeds.

The Wm. H. Moon Co., Morrisville, Pa. "Moon's Hardy Trees and Plants for Every Place and Purpose," 1911.

Thomas Meehan & Sons, Germantown, Philadelphia, Pa. Price list of tree, shrub and fruit seeds, autumn, 1910, and spring, 1911.

The Mount Carmel Forestry & Nursery Co. Hartford, Conn. Catalogue of Forest Trees.

J. C. Hale Nursery Co. Winchester, Tenn. Surplus List.

Chase Bros. Co. Rochester, N. Y. Wholesale Price List for Spring.

W. N. Scarff, New Carlisle, Ohio. Semi-Annual Surplus List of Bush Fruits.

Wm. McMorran, The Nurseries, Lanark, England. Wholesale List of General Nursery Stock.

Hurst & Son, Burbage Nurseries, Near Hinckley, Leicestershire, England. New Year Special Offer.

Jewell Nursery Co. Lake City, Minn. Surplus List.

Mount Arbor Nurseries, Shenandoah, Ia. Wholesale Trade List.

Rivoire Pere & Fils, Lyon, France. 16 Rue d'Algerie.

W. M. Grisinger, Salt Lake City, Utah. Wholesale trade list.

W. C. Reed, Vincennes, Ind. Bulletin No. 1.

J. H. Skinner & Co. Topeka, Kans. Wholesale Price list.

DeKalb Nurseries, Norristown, Penna. Surplus List.

I. E. Ilgenfritz Sons Co., Monroe, Mich. Surplus list No. 1.

William Street Nurseries, Rice Bros. Co., Geneva, N. Y. Trade List.

Sherman Nursery Co., Charles City, Ia. Surplus List.

James Truitt & Sons, Chanute, Kans. Surplus List.

Stark Bros. Nurseries & Orchard Co. Louisiana, Mo. Announcement of Year Book for 1911.

Ashby Nursery. Berkeley, Calif. Price list.

Ellwanger & Barry. Rochester, N. Y. Wholesale Price List.

The Eastern Dahlia King, J. K. Alexander, E. Bridgewater, Mass.

Johannes Rafn, Copenhagen-F Denmark.

Storrs & Harrison Co. Painesville, Ohio. Semi-Annual Price List.

P. D. Berry, Dayton, Ohio. Wholesale Price List.

Ellwanger & Barry. Rochester, N. Y. Novelties in Trees, Shrubs, Roses, and Hardy Plants.

Jackson & Perkins Co. Newark, N. Y. Bulletin, for February.

Huntsville Wholesale Nurseries. Huntsville, Ala. February Bulletin.

Leedle Floral Co. Springfield, Ohio. "Nothing but Roses."

James Vick's Sons. Rochester, N. Y. Wholesale Price List.

James Vicks' Sons, Rochester, N. Y. Garden and Floral Guide.

F. E. Myers & Bro. Ashland, Ohio. Spray Pumps.

Elm City Nursery Co. New Haven, Conn. General Descriptive Price List.

State Nursery Co. Helena, Mont. 1911 Catalogue.

F. W. Dixon. Holton, Kans. List of Small Fruit Plants.

Wild Bros. Nursery Co. Sarcoxie, Mo. Fruit trees and flowers.

Storrs & Harrison Co. Painesville, Ohio. General Catalogue, 1911.

John Lewis Childs. Floral Park, N. Y. Rare flowers, fruits, etc. Berrydale Experiment Gardens. Holland, Michigan. New standard berries.

Peter Henderson & Co. New York. Implement Catalogue.

R. Douglas' Sons. Waukegan, Ills. Wholesale Price List.

C. R. Burr & Company. Manchester, Conn. Special Wholesale List.

Linn County Nursery, Center Point, Iowa. Descriptive catalogue of fruit trees, small fruits, evergreens, and ornamentals, spring of 1911.

P. OUWERKERK,

No. 216 Jane St., Weehawken Heights, Hoboken, N. J.

Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our **HOLLAND NURSERIES**. Some of the goods on hand here during the packing season.

BOX STRAPS

WARD-DICKEY STEEL COMPANY

Manufacturers of Planished Sheet Steel

INDIANA HARBOR, IND.

GRAPE VINES

We offer for Fall and Spring delivery the largest and most complete stock of **GRAPE VINES** in strong grades for nurserymen and dealer's trade.

We also have an extra fine block of President Wilder currants which have made a strong growth.

SEND LIST OF YOUR WANTS FOR PRICES

T. S. HUBBARD COMPANY

Established 1866

FREDONIA, N. Y.

A well-known nursery house writes of our Credit List, "Had we had these reports years ago we would have saved several thousand dollars." Why don't you avoid further losses by joining the **National Florists' Board of Trade**, 56 Pine St., New York?

3,000 Standard Bartlett Pear

No. 1, 2-year

A good assortment of other kinds

W. B. COLE, Painesville, O.

The Southwestern Nursery Co.

of OKEMAH, OKLAHOMA

will have for late Fall and early Spring an exceptionally fine lot of **ONE YEAR APPLE, PEACH, PLUM and BUDDED ROSES; TWO YEAR CALIFORNIA PRIVET, CAROLINA POPLARS, and CATALPA SPECIOSA.**

WE INVITE YOUR INSPECTION.

EASTERLY NURSERY CO.

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OFFER FOR FALL 1911

One and two year Apple; One year and June Bud Peach; California Privet, in car-load lots. Also Magnolia, Grandiflora, Arbor-Vitea, Norway Spruce, Md. Plantier, and Baltimore Bell Roses. Ask for prices.

A BARGAIN IN STANDARD PEARS

Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere Address,

PIONEER NURSERIES COMPANY,

Salt Lake City, Utah.

THE MORRIS NURSERY CO.

WEST CHESTER, PA.

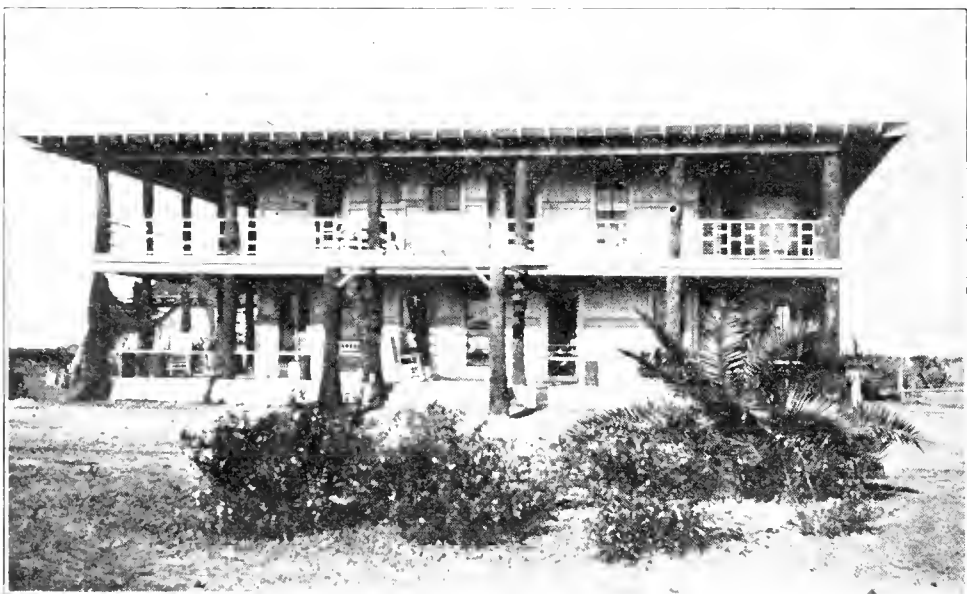
We can offer of fine imported plants, balled and burlapped, the following select list, which we offer at very reasonable prices, before they are planted in the nursery.

Abies Douglassi, 3 ft.	Retinispora filifera, 3 ft.
" glauca Douglassi elegans, 2 ft.	" " aurea, 20 in.
" concolor, 2 to 2 1/4 ft.	" aura Crippsi, 12 to 18 in.
" " 3 ft.	
" Nordmanniana, 3 ft.	Sciadotypus verticillata, 3 ft.
Cupressus Allumi, 2 to 3 ft.	Thuja Ellwanger aurea, 18 in.
Cedrus Atlantica glauca, 3 ft.	Tsuga Sargentii pendula, 2 ft.
Cryptomeria Japonica Lobbi, 3 ft.	Tree Box, Pyramidal, 2 ft.
Juniperus Pfitzeriana, 2 1/2 ft.	" " " 3 ft.
" Sabina, 2 ft.	" " tree form, 2 ft. stems, 16 in. head.
" tamaricifolia, 2 ft.	
" virginiana glauca, 18 to 24 in.	Rhododendrons, hardy kinds, 18 in.
Picea pungens glauca compacta, Koster, 3 ft.	" " " 2 ft.
Picea pungens glauca pendula, 3 1/2 to 4 ft.	Andromeda floribunda, strong plants
Picea orientalis, 3 ft.	" japonica, " "
" polita, 2 to 3 ft.	Mahonia aquifolia, strong plants
Pinus excelsa, 3 1/2 to 4 ft.	Daphne mezereum, red and white, strong.
" cembra, 2 to 2 1/2 ft.	Daphne cneorum, strong plants.
Retinispora obtusa, 3 ft.	Azalea amoena, 15 to 18 in.
" " nana aurea, 2 to 2 1/2 ft.	" pontica, red, white, pink.

LAS PALMAS,

A Beautiful Home and Immensely Profitable Nursery Property in the Brownsville Country, Lower Rio Grande, of Southwest Texas.

The photograph below pictures a unique palm-pillared bungalow, containing 400 feet of verandas, equipped with fireplaces, lofty, airy rooms, well furnished, supplied with artesian water and rain water, which is the headquarters of LAS PALMAS, a rapidly developing nursery establishment in the rich Brownsville country of Texas.



Palm-pillared Bungalow at "Las Palmas," Raymondsville, Texas.

Surrounding the artistic and comfortable headquarters are forty acres of land, of which twenty-five have been set with paper-shell pecans, and interplanted with oranges, grapes, fruit, figs, pomegranates, persimmons, and California grapes. In addition, it contains the largest palm nursery on the continent, comprising some 30,000 trees of the leading commercial varieties. These trees are in keen demand for decorating parks and boulevards throughout the Gulf Coast country.

To the nurseryman or plantsman having interest in a region where splendid soil, pure artesian water, and dry exhilarating air prevail, this property should appeal with peculiar force. It is owned by Harvey C. Stiles, San Antonio, Texas who will be glad to answer all inquiries regarding it.

WANTED MARCH 1st, experienced nursery-man. Married man preferred. Steady work, good position for right man. Give particulars, salary wanted, full description and references in first letter.
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Princeton, Ind.

WANTED Twelve to fifteen thousand one year Oriental Plane switches, March delivery. Sample and lowest cash price solicited for all or any part of order. Address A. R. BURT, Burton, La.

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Several thousand General Jack, J. H. Laing, Paul Neyron, Tom Wood, M. P. Wilder, Magna Charta, and other sorts.

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CALIFORNIA PRIVET OUR SPECIALTY

500,000 2-year Plants, 15 to 20 inches, 4 to 6 branches. 2 feet, 6 to 8 branches, 2 to 3 feet, 8 to 12 branches.

Prices given on application. Special prices on car lots. California Privet cuttings from 2-year plants. Lombardy Poplar cuttings.

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TREE FERNS, Vicksonia Antartica

Collected from cold districts above the snow line. Packed to travel safely to any part of the world; up to any height required. Price List on application.

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H. DEN OUDEN & SON

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Native Plants and Trees in Carload Lots

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Vines, and Conifers for Nursery Planting.

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Rhododendrons, Hardy Hybrids, named in the best modern American varieties, *Andromeda florabunda*, *Ericas*, *Azaleas*, *Kalmia latifolia*, and other American plants.

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Manetti Stocks for delivery Autumn 1911.

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Wholesale Growers of Fruit Tree Stocks, Ornamentals, Evergreen Seedlings, etc. Best Grading Quality, and Packing. Largest shippers to this country. All leading nurserymen are our regular customers. Orders booked now for delivery for season of 1911. Compare prices quoted in last Trade list. For catalogues and price list address us or our

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CUT IS EXACT SIZE
No shoddy here. Sample by mail, 50c. Blade is hand forged and warranted.
Nursery Budding Knives, 25c Pocket Budding Knife, 35c. All Steel Pruning Shears, California Pattern, post paid, \$1. Nursery and Florists' Propagating Knife, white handle, 50c.—You pay 75c for a much inferior knife. Send for a 12 page SPECIAL NURSERY CATALOGUE.

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Send us a list of your wants and let us quote prices. Will be glad to send a wholesale catalogue to every nurseryman and dealer.

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Butternuts, Paragon Chestnuts, English, Japan and Black Walnuts, Pecans.

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Quick Budding and Stiff Stems

Get into the market with better blooms—Sheep's Head Brand of Pulverized Sheep Manure will prove a money maker for you. Unsurpassed as an extra stimulant to plants, pots or beds. Will not cause black spot like stable manure. Free from weedseeds—always ready.

Carnations, roses, chrysanthemums and violets are particularly benefited. Send for booklet, "Fertile Facts." It shows you the dollars and cents view and points out the actual profits from using Sheep's Head Brand, and shows you how to prepare soils so that they will retain soluble plant foods near the surface of the ground within reach of the rootlets of growing vegetation. We will send you a copy of this interesting and instructive book free.

Write to-day.

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APPLE SCIONS OUR SPECIALTY.

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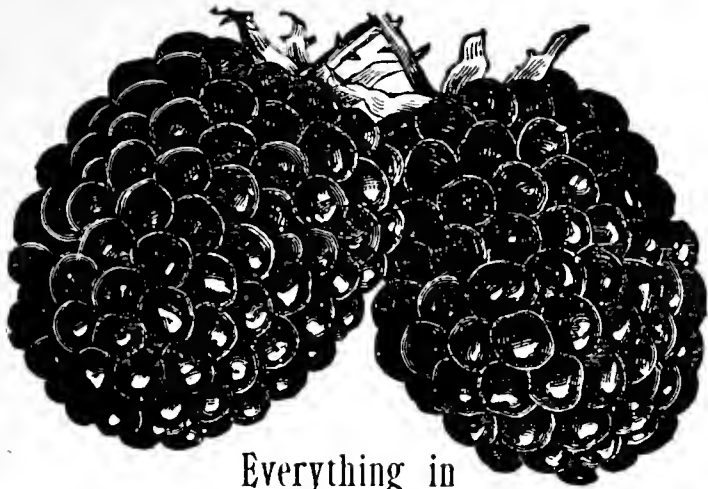
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Ask for price list.
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Catalogue on application.

Write us for estimates of total cost and full information about importing.



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Nice, clean and smooth stock

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The kind that give satisfaction.

Facilities for the handling of your requisite, combined with the quality of our product is unsurpassed.

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CHERRY APPLE PEACH
PEAR EUROPEAN PLUM

GOOD SUPPLY OF

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Shade and Ornamental Trees
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We have a large stock of MAPLE, ELM, OSAGE and HONEY LOCUST. Write for prices.

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Large stock of Polyantha (Baby) Roses and Climbing Roses, either on own roots or grafted on Canina

A Full Line of Hardy Nursery Stock
Price List Free

Cherry Trees for Spring 1911

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This book is designed to serve as a substantial reference book and is the result of special experience in the study of the practical aspects of plant pathology. There is a comprehensive discussion of the chief fungous diseases of cultivated and familiar plants.

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FOREST TREE SEEDLINGS

IMMENSE STOCK OF SEEDLINGS AS FOLLOWS:

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*Advance Price List of Evergreen and Forest Tree Seedlings
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We will also have our usual assortment of Fruits both large and small.

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Want Lists will receive immediate attention

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**CHERRY, PLUM, PEAR and QUINCE—
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**MAPLE—Norway, Silver, Weirs Ct. Leaf
CUT LEAF BIRCH**

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H. P. ROSES and CLIMBERS

**CLEMATIS—Large Flowering and Panic-
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A GENERAL LINE OF SHRUBS

Dealer's lists especially solicited for quotation.
All stock in storage ready for early Spring Shipment.

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FOR FALL 1910

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We have genuine Catalpa Speciosa and Black Locust in large quantities. You cannot afford to buy before getting our quotation, it will pay you.

Are now ready to quote you.

The Willadean Nurseries
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ROSEACRES, Coahoma Co.,

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We have a splendid stock of

Grape Vines

and other small fruit plants for the Nursery trade, graded up to the highest standard and sure to please you.

Give us a trial order, send in your list now for quotations

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Light Grade Apple Whips

Best Commercial Sorts

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Apple	Poplar Carolina	Ampelopsis
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Our stock is well grown and graded. Prices are such that it will pay to investigate. Come and see us or write.

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Station "A," Topeka, Kansas.

Fruit, Shade and Ornamental Trees

∴ FLOWERING SHRUBS ∴
APPLE AND PEAR SEEDLING
∴ FOREST TREE SEEDLING ∴

For Fall 1910

We wish to Call Attention to Our Offerings of

PEACH—One Year and June Buds. We invite inquiries NOW from buyers of June Budded peach, plum and apricot. We will bud especially to suit YOUR particular wants.

PLUM—De Soto, Wyant and Japanese varieties

PEAR, CHERRY AND QUINCE—As usual.

MULBERRY—A splendid assortment, in quantity.

PRIVET—California and (true) Amoor River.

ROSES—Leading Hybrid Perpetuals, also Hardy Climbers.

MAGNOLIA Grandiflora, SPIREA Van Houttei and ALTHEAS.

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Incorporated

HUNTSVILLE, ALABAMA



Wonderful Fall Bearing STRAWBERRY PLANTS

Fruit in Fall of first year and in Spring and Fall of second year. **Better than a Klondike Gold Mine.** From 500 plants set in Spring of 1910 we picked, from Aug. 20th to Nov. 12th, nearly 400 quarts, which sold at 40c to 50c a quart, netting us over \$200 to the acre. We have the largest stock in the world of "Francis," "Americus," "Productive," and "Superb," the four best varieties; also "Autumn" and "Pan-American." Now is the time to order these plants before everybody begins to grow them. Do not invest in seeds or plants of French or other worthless varieties. We are also headquarters for plants of "Norwood" and "Early Ozark" Strawberries; "Plum Farmer," "Idaho" and "Royal Purple" Raspberries, and all other valuable varieties of Berry Plants, Grapes, Currants, Gooseberries, Asparagus, Roses, "Hastings" Potatoes, etc. 28 years of experience. Catalogue free.

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Offer for SPRING 1910 large stock of Carolina Poplars; Catalpa Seedlings; Cal. Privet; Concord Grapes; Currants; Asparagus; and a full line of Ornamental Shrubs, Paeonies, etc.

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Seedmerchants
GROSS-TABARZ GERMANY.
SPECIALISTS IN
**Forest Tree Seeds &
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Offers on application.

Early Harvest Blackberry Root Cuttings, extra select.

Fall dug, recalloused and first class. Strawberry Plants, Cumberland and Kansas Hoosier Black Raspberry Plants.

Order now.

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SURPLUS At prices that will move this stock quick.

150,000 Black Locust and Catalpa Speciosa seedlings, all grades.
100,000 California Privets, 1 and 2 year, all grades and fine plants.
100,000 Asparagus, 2 year Plants Asst.
60,000 Peach trees, Good Asst.

Write at once, naming number, grades and kinds wanted for prices.

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WANTED—A working foreman.

Waxahachie Nursery Co.

J. R. MAYHEW, President

Surplus January 1st in

CHERRY, 1 and 2 year, all grades

APRICOTS, 5/8 to 3/4, and 3/4 inch up.

PEACH, 1/2 and 2/3 feet.

CALIFORNIA PRIVET, **EVERGREENS**,
ROSES, **SHADE TREES**, Etc.

SPECIAL QUOTATIONS on car load cherry.

Waxahachie Nursery Co.

WAXAHACHIE, TEXAS

"Nothing but Roses"

Spring Price List now ready
200 old and new sorts in 2 1/2 and 4-inch pots

THE LEEDLE FLORAL COMPANY®
SPRINGFIELD-OHIO.

Black Locust Seedlings

160,000 2 to 3 ft.

100,000 18 to 24 in.

140,000 12 to 18 in.

130,000 6 to 12 in.

Let us quote you prices that will move them.

Cunningham Nursery Co.

RISING SUN, IND.

PLANT FOR PROFIT

Berberry Thunbergii Seedlings

"Makes the finest of all hedge plants"

LARGE STOCK OF ALL GRADES FOR
IMMEDIATE SHIPMENT

C. R. BURR & CO.

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Fumigation with Hydrocyanic Acid Gas Generated From Cyanide $\frac{98}{99}\%$

Is the only positive eradicator of San Jose Scale and other Insect Pests. Endorsed by all agricultural experiment stations.

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OFFER *for Spring 1911*

GRAPE VINES—One and two years old. Varieties largely Moore's Early, Concord and Niagara. Also Scarlet or Crimson Clover Seed and Cow Peas. Free from weed seeds, all cleaned and guaranteed first class.

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We offer a NICE ASSORTMENT OF PEACHES

in 1 year and June Buds

**Japan Plum Carolina Poplar
and California Privet**

Let us price your wants on the above stock.

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Rosa Polyantha

(MULTIFLORA)

Very good stock to work Roses in place Manetti and Griffariae when missing transplanted seedlings 1 year.

1st size, 4 to 8 mm.

2nd size, 3 to 4 mm.

Special prices on application. For all other French stocks ask for our wholesale list.

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WE OFFER

For FALL 1910 and SPRING 1911
Grape Vines, Currants and Gooseberries
in all varieties and Grades

— also —

Grape and Currant Cuttings and Light
Grade of Vines for Lining Out
in Nursery Rows

WRITE FOR PRICES

F. E. SCHIFFERLI, Fredonia, N. Y.

Vincennes Nurseries,

W. C. REED, Prop.

VINCENNES, IND.

Leading Specialties for Fall 1910, and Spring 1911.

Cherry—Two Years, $\frac{3}{4}$ to 1 in., and 1 inch up. Best block we have ever grown.

Cherry—One Year. All Leading Varieties. Strong on Sweets, such as Bing, Lambert, Luelling, and other Western Sorts.

Standard and Dwarf Pear—One and Two Year.

150000 Apple—One Year. Strong on leading commercial varieties.

10000 Quince One and Two Year.

30000 Plum—One and Two Year, on Peach and Plum roots.

150000 Peach—One Year. All leading varieties.

5000 Norway Spruce, 2 to 3 feet, and 3 to 4 feet.

Also general line of other stock. *Personal inspection invited.*

Our Blocks of Cherry are among the largest in the country. None better.

E. T. DICKINSON,

CHATENAY SEINE, FRANCE.

Grower and Exporter of

French Nursery Stocks, Dutch Bulbs, Gladioli, Etc. Fruit
Tree Stocks. All grown for the American trade.

PEAR AND CRAB APPLE SEED,

The most complete assortment of Ornamental Stocks,
Trees and Shrubs.

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Forest Trees

Grown at our nursery at Mt. Carmel, Conn.

Send for Price List. We are specialists in caring
for old trees.

**The Mt. Carmel Forestry
and Nursery Co.**

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CONN.

Seedling and Transplanted Evergreens by the million

Arbor Vitae
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Jack Pine
Norway Spruce
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White Spruce

We have these in all sizes and ages. Also
a general line of nursery stock.

Evergreen price list now ready.

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NURSERY COMPANY**
CHARLES CITY, IOWA

SIMPSON

is the name of the men who
grow the finest

CHERRY

that can be produced by suitable soil,
climate and expert knowledge.

Take a look at the stock or ask for a
sample and be convinced of the *extra*
quality of their

TREES

CHERRY, 2-yr., 1 1/2-inch up, 7 to 8 feet, for high-
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CATALPA SPECIOSA, 2 to 3 feet.

H. M. Simpson & Sons,
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GRAPE VINES

Our annual plantings of Grape Vines
have for many years been

Largest in the World!

Gooseberries and Currants are
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WE TRY to be progressive in adopting
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which will do our work quicker
and cheaper. With faithful care and culti-
vation and generous fertilization we are
managing to grow high-grade stock. : : :
Our continual increase of nursery trade for
more than thirty years seems to be the re-
sult of our methods and ways of doing
business. : : : : : : : : : :

GEO. S. JOSSELYN,
FREDONIA, N. Y.

HAWKEYE Tree Protectors



Give dollars worth of protection at a fraction
of a cent cost. Don't take a chance with your
young trees. One rabbit will kill many in a
single night. Protect yours with Hawkeye,
the protector that rabbits, mice and other tree
gnawers can't gnaw through—the protector
that protects against cut worms and prevents
trees becoming skinned or bruised by cultiva-
tor or lawn mower.

Hawkeye tree protectors are elm veneer
chemically treated. They are easily applied to
the trees and will last until the tree is beyond
the need of protection.

The value of one tree is more than all the
Hawkeye tree protectors you need will cost
you. Send us your order before some of your
trees are killed—You will regret it if you wait
until too late.

Write for prices today
Burlington Basket Company
120 Main Street, Burlington, Iowa

or State Agents

FAIR OAKS NURSERY CO., Traverse City, Mich.
THE WELCH NURSERY CO., Madison, Ala.
ELIZABETH NURSERY CO., Elizabeth, N. J.
Mr. H. C. BAKER, Tunkahannock, Pa., R. F. D. No. 2.
G. M. WESTLAND, Wenatchee, Wash.
HUMPHREY NURSERIES, Humphrey, Neb.
PARKER BROS. NURSERY CO., Fayetteville, Ark.
Mr. C. H. WEBSTER, The Dalles, Ore.
O. K. NURSERIES, Wynnewood, Okla.

ORNAMENTAL STOCKS

NURSERIES
420 ACRES

WE GROW

FRUIT TREE STOCKS—All Sizes.
300 varieties of Conifers, 1 to 4 years old.
1200 varieties of Ornamental Trees and Shrubs, 1 to 3 years old.
1600 varieties of New and Old Ornamental Trees & Shrubs in all Sizes.
250 varieties of Climbing Plants.
400 varieties of Conifers, 1 to 4 feet high.
400 varieties of Perennials.
800 varieties of New and Old Roses.

We Have No Agents.
Write direct to us and
ask for **WHOLESALE**
CATALOGUES

TRANSON BROS. & D. DAUVESSE'S NURSERIES,

16 Route d'Olivet

BARBIER *and* CO., Successors,

Orleans, France

Raspberry Plants

We have a SURPLUS and are in a position to quote you attractive prices.

500,000 Cuthbert	200,000 Gregg
300,000 Miller	300,000 Kansas
100,000 King	200,000 Cumberland
	300,000 Conrath

Other varieties in smaller quantities. Also millions of strawberry plants of all leading varieties. Write us today and let us give you estimates.

DAVID KNIGHT & SON
SAWYER, MICH.

ELMWOOD NURSERIES

We offer for Spring 1911, clean, well grown, heavily branched

CALIFORNIA PRIVET

5,000 2-year, 4 to 5 ft.	50,000 1-year, 30 to 40 inches
25,000 2-year, 3 to 4 ft.	40,000 1-year, 20 to 30 inches

AMoor RIVER PRIVET

10,000 2-year, 4 to 5 ft.	25,000 1-year, 2 to 3 ft.
20,000 2-year, 3 to 4 ft.	15,000 1-year, 18 to 24 inches.

Sugar, Silver, Norway and Ash-leaved Maples; Elms, 8 to 10 ft.; Texas Umbrella, strong whips, 4 to 6 ft.; Hydrangea P. G., bush and tree forms; Crimson Rambler Roses, 3-year; Magnolia Grandiflora, 2 to 6 ft. Special prices on car lots.

J. B. WATKINS & BRO., Midlothian, Va.
Southern Railroad.

"I Have So Little Fungus" that I cannot afford to mark my fruit with Bordeaux," says Mr. GEORGE T. POWELL, of Ghent, N. Y., a grower of fancy apples. "I have less scale and finer foliage than ever before." **REASON:** Five years' consecutive use of

"SCALECIDE"

cheaper, more effective and easier to apply than Lime-Sulphur.

Send for Booklet "Orchard Dividends," and "Modern Methods of Harvesting, Grading and Packing Apples."

PRICES: In barrels and half barrels, 50c per gallon; 10 gallon cans, \$6.00; 5 gallon cans, \$3.25; 1 gallon cans, \$1.00.

If you want cheap oils, our "CARBOLEINE" at 30c per gallon is the equal of anything else.

B. G. PRATT CO., MFG. CHEMISTS, 50 CHURCH ST., NEW YORK CITY.

ENGLISH NURSERY STOCK

EXTENSIVE STOCK OF CONIFERS, including a quantity of well-shaped specimens for decorative purposes. Low prices can be quoted on all Conifers. **HARDY ORNAMENTAL EVERGREEN AND DECIDUOUS TREES. ROSES**, Standards, Dwarfs and others. **MANETTI** and other **ROSE STOCKS. FRUIT TREES** in large quantities. Transplanted **FRUIT TREE STOCKS. RHODODENDRONS** and other **AMERICAN PLANTS.** (A good stock of all hardy varieties of Rhododendrons). **CLEMATIS** and other **HARDY CLIMBING PLANTS.** Transplanted **FOREST TREES.** The stock is in excellent condition this season. **FIRST GRADE STOCK ONLY SUPPLIED.** 30 years' successful trading in the States. No Agents. Write direct for wholesale catalogue.

Walter Charles Sloccock

Half-hour's rail from London by L. & S. W. Ry.
Main Southampton Line;

GOLDSWORTH NURSERY, Woking, Surrey, Eng.

When writing to Advertisers please mention The National Nurseryman.

You're Going to Sell a Lot of Strawberry Plants this Year, Aren't You?

Let us know your wants at once--our prices will interest you.

We grow them by the million--have more than a hundred varieties. We devote one whole farm, where we have found the soil to be "just right," to growing strawberry plants, and those we supply cannot be excelled either for quality of plant nor grade of berry produced. We pack in special cases so that plants cannot suffer by long-distance shipping; will take good care of orders large or small.

DECIDUOUS ORNAMENTALS

STRAWBERRY

We Have Over Ten Million Plants

120,000 Aroma	120,000 Lady Thompson
30,000 Auto	23,000 Mark Hanna
52,000 Bederwood	120,000 Maseot
10,000 Bismarck	125,000 Millionaire
52,000 Brandywine	186,000 Michel's Early
834,000 Bubach	42,000 New York
27,000 Chipman	54,000 New Home
310,000 Crescent	79,000 Nick Ohmer
440,000 Duncan	30,000 Norwood
138,000 Ea. Hathaway	72,000 Oak's Early
54,000 Ekey	88,000 Oswego
68,000 Excelsior	220,000 Sample
45,000 Fairdale Giant	118,000 Sen. Dunlap
200,000 Fendall	240,000 Sharpless
2,456,000 Gandy	120,000 Star
188,000 Glen Mary	20,000 Stephens' L. C.
400,000 Haverland	75,000 Superior
30,000 Johnson's Ea.	248,000 Tennessee
2,280,000 Klondike	330,000 Warfield

CALIFORNIA PRIVET

1000, 7 to 8 ft.	50000, 2 to 3 ft.
2000, 6 to 7 ft.	50000, 18 to 24 in.
10000, 5 to 6 ft.	50000, 12 to 18 in.
20000, 4 to 5 ft.	10000, 6 to 12 in.
50000, 3 to 4 ft.	

American Elm--

50, 8 to 10 ft. high, 1 1/4 in. diameter.
1000, 6 to 7 ft. high, 1 in. diameter.

American Linden--

50, 8 to 10 ft. high, 1 1/4 in. diameter
50, 6 to 7 ft. high, 1 in. diameter.

Barberry Thunbergii-- Baby Rambler Rose--

2000, 18 to 24 in.
5000, 12 to 18 in.

Box Elder--

1700, 8 to 10 ft. high, 1 1/4 in. diameter.
1000, 6 to 7 ft. high, 1 in. diameter.

Catalpa--

500, 8 to 10 ft. high, 1 1/4 in. diameter.
500, 6 to 7 ft. high, 1 in. diameter.

Norway Maple--

200, 12 ft. high, 2 in. diameter.
2000, 10 ft. high, 1 1/2 in. diameter.
3000, 8 to 10 ft. high, 1 1/4 in. diameter.
5000, 6 to 7 ft. high, 1 in. diameter.

Russian Mulberry--

500, 8 to 10 ft. high, 1 1/4 in. diameter.
1000, 6 to 7 ft. high, 1 in. diameter.

Silver Maple--

500, 12 ft. high, 2 in. diameter.
5000, 10 ft. high, 1 1/2 in. diameter.
3000, 8 to 10 ft. high, 1 1/4 in. diameter.
5000, 6 to 7 ft. high, 1 in. diameter.

EVERGREENS (burlapped)

American Arborvitae--	Koster's Blue Spruce--
100, 5 to 6 ft.	24 to 30 in.
300, 4 to 5 ft.	1000, 18 to 24 in.
300, 3 to 4 ft.	1000, 12 to 15 in.
1000, 2 to 3 ft.	Norway Spruce--
1000, 18 to 24 in.	100, 5 to 6 ft.
2000, 12 to 18 in.	3000, 4 to 5 ft.
Azaleas, Assorted	4000, 3 to 4 ft.
Blue Cedar--	5000, 2 to 3 ft.
500, 18 to 24 in.	1000, 18 to 24 in.
500, 24 to 30 in.	5000, 12 to 18 in.
Colorado Blue Spruce--	Pyramidal Arborvitae--
50, 3 ft.	1000, 2 to 3 ft.
100, 2 ft.	1000, 18 to 24 in.
1000, 1 ft.	1000, 12 to 18 in.
Hemlock Spruce--	Rhododendrons--
100, 5 to 6 ft.	Assorted.
100, 4 to 5 ft.	
100, 3 to 4 ft.	

SURPLUS LIST OF PEACH, JAN. 20th, 1911

	1-in.	3/4-1 in.	5/8-3/4	1/2-5/8	3/8-1/2	2-3 ft.	1-2
Arkansas Beauty.....	6-8	6-7	5-6	4-5	3-4		
Alexander		100	150	100	110	60	70
Amsden June	200	130	130	50	20		
Allbright's October		200	200	200	200		
Atlanta		90	140	90	120	50	60
Smock	200	200	200	200			
Bilyeu	150	500	2000	2000	6000	3000	600
Burke Cling	100	100					
Brandywine		100	220	130	160	120	110
Bray's Rare Ripe	50	200	200	200	200	200	
Chair's Choice	100	940	900				
Cornelia	350	350	1000	1000	500	500	200
Champion		210	210	110	180	70	60
Chinese Cling	1000	2000	2000	2000			
Cobler	150	150	150	150	150	150	150
Connett's So	50	100	100	100	100	100	
Crawford's Late	500	1000	1000	1000	1000	1000	500
Crawford's Early	100	1000	500	500	500	500	500
Crosby	100	100					
Denton	1000	1000					
Easton Cling		300					
Early Michigan		100	220	160	130	90	30
Early Rivers	100	200	150	100	100		
Edgmont By	100	100	100				
Elberta	100	400	700	100			
Engles' M	9000	9000	24000	29000	22000	18000	5000
Eureka	100	100					
Fitzgerald	200	300	500	400	100		
Ford's Late	100	100					
Foster	200	200					
Geary's Hold-On	100	100					
Gold Drop	500	500	1000	1000	1000		
Greensboro	300	300					
Heiley's	2000	2000	5000	3000	2000	500	
Krummell's	200	500	1000				
Levy's Late	500	500	500				
Lyndon Cling	500	500	500	500	500	500	
Lodge	250	150	190	90	90	70	30
Lorentz	300	250	250				
Mamie Ross	300	300	300	300	300		
Marshall	500	500	500	500			
Matthew's Beauty	100	100	100	100	100	100	
Mayflower	200	200	200				
McCollister	500	500	500	500			
Moore's Favorite	500	500	500	500	500	500	
Mt. Rose	2000	2000	5000	5000	1000	500	
Newington Cling	500	500	3600	1600	1400	2500	2700
Niagara	200	200	50	50	50	50	50
Nina	500	500					
Old Mixon Free		100	210	110	120	70	40
Old Mixon Cling	2000	3000	3000	3000	2000	1000	1000
Proquet Late		10	150	80	60	30	10
Princeton Cling	300	300	300	200	200	200	100
		180	210	80	60	40	20

Prize	1000	1000	500				
Ray	3000	4000	5000	2000	2000	2000	2000
Reeve's Favorite	3000	3000	3000	3000	3000	1000	1000
Salway	3000	4000	5000	2000	2000	2000	2000
Slappey	2000	2000	2000	2000	1000	1000	1000
Stouewall Jackson		150	150	120	80	50	30
Sneed	400	400	300				
Stimson October		160	190	110	100	40	30
Stephen's Rare Ripe	500	500					
Stump	3000	3000	2000	500	500		
Sunrise Cling	300	300	300	200	100	100	100
Triumph	600	600	600	400	200		
Waddell	2000	2000	1000				
Wheatland	100	100	100	40			
W. H. Cling	300	300	300	300	300	300	300
Wilkins' Cling	200	200	200	200	200	200	200
Wonderful	2000	3000	5000	4000	3000	2000	1000
Walker's Free	300	300	300	300	100	100	100
Belle of Georgia	1000	4000	9000	9000	9000	2000	500

SURPLUS PLUMS

	1-in.	3/4-1 in.	5/8-3/4	1/2-5/8	3/8-1/2
	6-8	6-7	5-6	4-5	3-4
Wickson	1000	3000	500		
Red June		2000	1000	1000	2000
Burbank	500	1500	1000	1000	
Abundance		1500	1000	1000	2000

SURPLUS CHERRY

	1-in.	3/4-1 in.	5/8-3/4	1/2-5/8	3/8-1/2
	5-6	4-6	4-5	3-4	2-3
Baldwin	200	200	200	200	200
Early Richmond	2000	6000	9000	7000	5000
Montmorency	1000	5000	8000	6000	4000

STANDARD PEAR TWO YEAR

	1 in.	3/4-1 in.	5/8-3/4	1/2-5/8	3/8-1/2
	6-8	6-7	5-6	4-5	3-4
Bartlett			5000	10000	10000
Flemish Beauty				1500	1500
Garber		1000	1000	1000	1000
Keiffer	2000		3000	3000	1000
Keiffer (one year)			9000	9000	9000
Bartlett (Dwarf)			2000	2000	200

GRAPE TWO YEAR TRANSPLANTED

60,000 Concord
20,000 Moore's Early

ASPARAGUS TWO YEAR

50,000 Palmetto
50,000 Barr's
50,000 Conover's
50,000 Donald's Elmira
50,000 Giant Argenteuil

Harrison's Nurseries
J.G. HARRISON & SONS PROPRIETORS
BERLIN MARYLAND



THE NATIONAL NURSERYMAN



APRIL, 1911

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

The Monroe Nursery

Established 1847.

OFFER A GENERAL LINE OF

Choice Nursery Stock

PEACH, STD. PEAR,
PLUM, CHERRY, Etc.

I. E. Ilgenfritz' Sons Co.

MONROE, MICH.

Mount Arbor Nurseries

E. S. WELCH, Proprietor

Shenandoah, Iowa

Make a Specialty of a Full Line of
General Nursery Stock for the
Wholesale Trade

WE HAVE A SURPLUS OF

APPLE—some varieties.

CHERRY—sour and sweet varieties.

EUROPEAN PLUM

CONCORD GRAPE. CURRANTS

AMERICAN ELM SEEDLINGS

HYBRID PERPETUAL ROSES

CALIFORNIA PRIVET

Will be pleased to name prices on your wants.

ASK FOR TRADE LIST AND BULLETINS

EVERGREENS

OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI

by the thousand.

Andorra Nurseries,

WM. WARNER HARPER, Prop.

CHESTNUT HILL, PHILA., PA.

C R A B S

50,000 11/16 and up, 5 to 6 feet

45,000 9/16-11/16, 4 to 5 feet

20,000 3 to 4 feet branched

Alaska, Beeches' Sweet, Darth Early Strawberry, Excelsior,
Faribault, Florence, Hiller, Hyslop, Lyman's Pro. Minnesota,
Orange Pickers, Quaker B, Siberian, Sweet Russett, Sweet
Orange, Transcendent, Virginia, Whitney.

THE LARGEST STOCK OF CRABS IN
THE COUNTRY THIS SEASON

LET US PRICE YOUR LIST, WE ARE PUTTING THEM
DOWN CLOSE TO COST.

All extra smooth Stock—samples on request.

The Jewell Nursery Co.

LAKE CITY, MINNESOTA

— YOU WILL NEED —

★ RAFFIA ★

GUARANTEED “Red Star Brand” GUARANTEED

The nurserymen's favorite. Strictly selected—long, strong, white strands, done up in assorted size braided hanks. The quality is always uniform—always dependable. Every pound guaranteed. “Nuff” said. If you prefer we can supply a cheaper grade, the “Arrow Brand.”

Write for special quotations—mention quantity used and we will send sample free.

ORDER NOW FOR IMMEDIATE OR MAY-JUNE DELIVERY.

HUNDREDS OF BALES ALWAYS ON HAND.

IF YOU USE RAFFIA WRITE US

McHUTCHISON & CO., 17 Murray St., New York City

— RAFFIA IMPORTERS AND WHOLESALERS —

PEAR PSYLLA

THE worst enemy of the Pear Growers cannot be controlled with lime sulphur, but “SCALECIDE” used in the spring—just before leafing will not only control the Psylla, but San Jose Scale and all fungus trouble controllable in the dormant season.

PRICES: In barrels and half barrels, 50c per gallon; 10-gallon cans, \$6.00; 5-gallon cans, \$3.25; 1-gallon cans, \$1.00. Conclusive proof in booklets, “Orchard Dividends” and “Modern Methods of Harvesting, Grading and Packing Apples.” Both free. If you want cheap oils, our “CARBOLEINE,” at 30c per gallon, is the equal of anything else.

B. G. PRATT CO.

MFG. CHEMISTS

50 Church Street

NEW YORK CITY

Buy Early for Fall Orders

THE GRIFFING NURSERIES

Will have the most complete stock of trees and plants to offer from their

FLORIDA AND TEXAS NURSERIES

For delivery season 1911-12 ever offered in the South

We Can Probably Supply Your Wants

Budded Pecans, Japanese Persimmons, Figs, Muscadine Grapes, Satsuma and other Hardy Oranges, Grape Fruit and Kumquats, Mulberries, Non-sprouting Grafted Roses, Crape Myrtle, Biota Aurea Nana and other Conifers, Eucalyptus and Camphor Trees are a few of our leaders.

A complete assortment of Fruit, Nut, Ornamental Trees and Shrubby.

THE
Griffing Brothers Company
General Sales Office, JACKSONVILLE, FLA.

— BRANCH SALES OFFICES AND NURSERIES AT —
MACCLENNY, FLORIDA PORT ARTHUR, TEXAS
MIAMI, FLORIDA McALLEN, TEXAS

NURSERYMEN AND FLORISTS

looking for stock can find largest assortment in the
United States at the

Painesville Nurseries

Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
Plants, Grapes, Gooseberries, Small Fruits, Bulbs, Seeds, Palms
and other tender Greenhouse Plants

Have a large stock stored in frost proof cellars that can be shipped at any time desired;
switch from N. Y. C. lines direct into our packing house; can load without exposure.
Unsurpassed facilities for handling orders large or small. Catalogs and price lists free.

A few specials while they last:

STANDARD PEARS in assortment DUCHESSE DWARF PEARS BOURGEAT QUINCE
PRUNUS PISSARDI and TRILOBA CUTHBERT AND OTHER RASPBERRIES
CONCORD AND OTHER GRAPES

OUR SPECIALTIES ARE

ROSES

H. P.

Moss

Ramblers

Climbers, Etc.

PEACHES

PEARS

PLUMS

CHERRIES



KOSTER'S BLUE SPRUCE

Ornamental

Trees and

Shrubs in

Car Lots

Weeping Mulberries
Elm and Ash

Clematis

Ampelopsis

Paeonies

Hydrangeas, Bush
and Tree

Perennial Plants

NO TROUBLE TO PRICE YOUR LIST OF WANTS

55 Years

1200 Acres

44 Greenhouses

THE STORRS & HARRISON CO.

PAINESVILLE, OHIO

CUT LEAVED BIRCH...

6 to 8 feet
8 to 10 feet
10 to 12 feet

HANDSOME TREES

....AT....

ATTRACTIVE PRICES

Ellwanger & Barry

Mount Hope Nurseries

ROCHESTER, N. Y.

Jackson & Perkins Company

offer to the trade an unusually complete assortment of Fruit and Ornamental Stock, including some things scarce and hard-to-find; their Tree Hydrangeas, Tree Lilacs, Roses, Clematis, Ampelopsis Veitchii, Dwarf Apples, Cherries on Mazzard, and a few other Specialties, have earned for the J & P goods the name of

"PREFERRED STOCK"

A few more buyers can be taken care of very well. Want Lists are invited. January Bulletin will be sent on request. The address is

Jackson & Perkins Company

Dispensers of The Preferred Stock, grown at NEWARK, which is in WAYNE COUNTY, near Rochester, New York

SPECIAL NOTICE

APPLE QUINCE PEAR CHERRY
PEACH PLUM

A Fine Block of
Own Root Roses

ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
EVERGREENS PEONIES PHLOX
PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

Write for our Special Prices

Special Attention given to Dealers, complete lists and carload lots.

W. & T. SMITH COMPANY

GENEVA, N. Y.

63 Years

700 Acres

Azalea Indica
(Home-Grown)

Berberis Japonica
Magnolia Grandiflora

Yucca Treculeana
Biota Aurea Nana

Field-Grown
Roses

Write for Prices
and Information



Get Some of This Stock For Your 1911 Trade NOW

We have a considerable stock of the trees and shrubs mentioned above, and offer them to the 1911 trade at reasonable prices. This is all clean, first-class stock, and will be sure to please your trade in every way.

Our location offers a distinct advantage, in that we can grow stock here which succeeds admirably both north and south of us. The above varieties are such as will transplant readily and thrive for your customers, almost regardless of location, after the splendid start which they get in this warm and genial climate. We have thousands of satisfied customers in nearly all parts of the country.

We grow a full stock of Ornamentals, Fruits and Nuts, and invite inquiries from the trade relative to particulars on anything in which they are interested.

P. J. Berckmans Co., Inc., Fruitland Nurseries
Augusta, Georgia

Established 1856

Over 450 Acres in Nurseries

The Best Tree Digger on Earth



Used and Recommended by Leading Nurserymen.

The one we have used for years and by far the most satisfactory of any we have ever seen. It does exactly the work for which it was designed and does it right. If interested we will be glad to send description and prices.

Stark Bros. Nursery & Orchards Co.
LOUISIANA, MO.

R. DOUGLAS' SONS

WAUKEGAN NURSERIES

WAUKEGAN, ILLINOIS

Evergreen Seedlings

IN LARGE QUANTITIES

EVERGREENS FOREST TREES

A Full line of Ornamental Trees
and Shrubs

ESTABLISHED 1848

The Farmers Nursery Company

TROY,

OHIO

OFFER

APPLE, assorted, heavy in light grades

PEAR, Standard, assorted, extra fine lot of Kieffer

CHERRY, 2 year, the finest stock we have ever grown

PLUM, Japan and English, good assortment of varieties

PEACH, choice stock in all grades

EVERGREENS

ARBOR VITAE, 2 to 8 ft.

NORWAY SPRUCE, 2 to 8 ft.

ARBOR VITAE, 2 to 4 ft.

BALSAM FIR, 2 to 5 ft.

These evergreens have been transplanted, and are fine specimen plants. Can supply in carload lots

Silver Maple, Am. Elm, C. L. W. Birch, all sizes
Catalpa Bungei, 3 year heads

Catalpa Spec. Seedlings, all grades. Golden Willow 2 year plants

Stock grown at Dansville, N. Y. and Troy, O.

Franklin Davis Nursery Co.

BALTIMORE, MD.

We offer for FALL 1910 and
SPRING 1911

APPLE 1 and 2 year; heavy on York Imperial, Stayman's Winesap, Blacktwig, Grimes Golden, and other standard varieties.

PEAR, STANDARD, Kieffer, 2 and 3 year, and other leading kinds.

PEACH; Expect our Peach to be fine; we have a heavy stock and will book orders for several carloads now. Peach are bound to advance. We are heavy on Elberta, Carmen Crawford's Late, Old Mixon Free, Stump, Beer's Smock, etc., etc.

ASPARAGUS, 1 and 2 year; Palmetto, Barr's, Conover's Giant.

CHERRY, 2 yr. leading varieties.

PRIVET, 1 and 2 year, a fine lot of heavy No. 1 plants.

POPLARS, a fine lot of Carolina and Lombardy in all sizes, by the carload.

PLANES, a fine lot of Oriental Planes in all sizes.

CATALPA SPECIOSA, several thousand at a low price.

ELMS, AMERICAN; Several hundred nice trees.

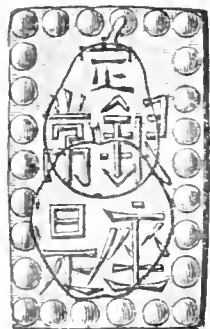
WALNUTS, JAPAN, in all sizes.

Extra large bushy SHRUBS, such as Altheas, Weigelas, Spireas, Deutzias, Snowballs, Judas, Hydrangea, P. G.

Extra large SUGAR MAPLES several hundred 3 to 3 1-2 and 4 to 4 1-2 inches, fine trees, with good heads and straight bodies.

We also have a general line of other stock. Send us your want list.

Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries
Huntsville, Ala.

JESSIE S. MOSS, Prop.

We offer for Fall of 1910 and Spring of 1911 in large quantities as usual:

SPECIALTIES

- APPLES**—Commercial varieties, one year, in large supply. As fine in quality as ever grown.
- PEARS**—Kieffers, one and two years old. A much smaller crop than heretofore.
- CHERRIES**—On Mazzard. One year. Bing, Lambert, Napoleon, Black Tartarian.
- CHERRIES**—On Mahaleb. One and two years. Ea. Richmond, Dyehouse, Montmorency, Wragg, Royal Duke, in small supply.
- PEACHES**—We excel in Peaches, and of these we will have as fine a stock as we have ever grown, both in one year and June Buds.
- ROSES**—Budded. We will have a large and fine stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.
- PRIVET**—Amoor River. Retains its foliage longer and holds its color better than California Privet.
- MAGNOLIA G. F.**—Huntsville grown. Handsome, young plants, transplanted.

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Every nurseryman must buy some stock to fill out his orders. To know "right off the reel" where to get that stock is a big advantage. It means the saving of much valuable time. We call to your attention our facilities for handling such orders.

We have 225 acres devoted to the proper growing of Hardy Ornamental Nursery Stock and it is stock that will satisfy the most particular customer. Every plant in our nursery has been properly grown and is healthy. The stock is fully up to grade and we have a fine assortment of varieties and large quantities of all sorts. Furthermore, we are in a position to handle and ship all orders with a promptness that will please. When in need—just think of Meehan—and send in your order. We will give you service and quality that you can depend upon. Send for our complete catalogue showing what we have to offer and the prices. This list will prove invaluable to you and a copy should be on your desk.

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A briary vine like a blackberry, which grows forty feet a year unless trimmed. New growth starts from ends of last year's branches and tips. Berries are borne on old and new wood alike. A hundred thousand vines came through our severe Michigan winter without an inch of deadwood and without the slightest winter killing. The berries are black, roundish, an inch long, as good as strawberries—flesh solid all the way through. They are so firm that they may be shipped and re-shipped. One man sold \$30.00 worth from two plants in their second year. We get ten tons an acre from three-year-old plants, and sell them all quick at sixteen cents a quart. We are growers—and the original introducers in the East. Himalaya plants grow best when planted after the soil is warm. They can be successfully planted as late as July 15th.

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Himalaya is a perennial just the same as an apple, bearing on the old fruit-spurs extremely juicy, luscious berries. They are delicious when served uncooked for desert, and may be used for almost every purpose for which berries are adapted. Three times as much jam or jelly may be made from Himalaya than with ordinary blackberries. Last year we sent Giant Himalaya Berry plants to over fourteen hundred different people, and everyone was satisfied.

I have seen the Giant Himalaya Berry growing and fruiting at the Berrydale Experiment Gardens, and consider it the best cropping blackberry I know of. I noticed branches on which there were from fifty to a hundred berries. These were jet black, and the size of a Lawton berry. Its blossoms come late, and crops are sure. It will stand more frost than any berry we have ever had here. I shall plant two and a half acres of Himalaya next spring. C. KRAUS, Holland, Mich., Oct., 1910.

The Himalaya berry plants received in the very best shape.

C. B. BILLINGS, Montana.

Eighteen months old plants that will fruit this summer. One dollar each, prepaid. **Get A Berrydale Berry Book**

Berrydale Berry Book is an unusual catalogue. It goes out of beat-tracks, tells about several dozen good berries, and is sent free. A copy will help you to lower the high cost of living, and to have better health. Ask for one without fail.

No more Rooted Tips Himalaya Berry for sale this spring—all sold. Orders booked now for fall delivery, Strong Rooted Tips Himalaya.

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" glauca Douglassi elegans, 2 ft.	" " aurea, 20 in.
" concolor, 2 to 2 1/2 ft.	" aura Crippsi, 12 to 18 in.
" " 3 ft.	
" Nordmanniana, 3 ft.	Sciadotypus verticillata, 3 ft.
Cupressus Allumi, 2 to 3 ft.	Thuja Ellwanger aurea, 18 in
Cedrus Atlantica glauca, 3 ft.	Tsuga Sargentii pendula, 2 ft.
Cryptomeria Japonica Lobbi, 3 ft.	Tree Box, Pyramidal, 2 ft.
Juniperus Pfitzeriana, 2 1/2 ft.	" " " 3 ft.
" Sabina, 2 ft.	" " tree form, 2 ft. stems, 16 in. head.
" tamaricifolia, 2 ft.	
" virginiana glauca, 18 to 24 in.	Rhododendrons, hardy kinds, 18 in.
Picea pungens glauca compacta, Koster, 3 ft.	" " " 2 ft.
Picea pungens glauca pendula, 3 1/2 to 4 ft.	Andromeda floribunda, strong plants
Picea orientalis, 3 ft.	" japonica, " "
" polita, 2 to 3 ft.	Mahonia aquifolia, strong plants
Pinus excelsa, 3 1/2 to 4 ft.	Daphne mezereum, red and white, strong.
" cembra, 2 to 2 1/2 ft	Daphne cneorum, strong plants.
Retinispora obtusa, 3 ft.	Azalea amoena, 15 to 18 in.
" " nana aurea, 2 to 2 1/2 ft.	" pontica, red, white, pink.

WILLOWDALE NURSERIES

We have the following varieties of peaches in surplus, all fine, first-class stock :

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RED CHEEK	NIAGARA
FOSTER	CHAIRS CHOICE
STUMP	MT. ROSE
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EA. YORK	TROTH'S EARLY
STEPHEN'S RARERIPE	GREENSBORO

Write us for special prices on Sour Cherries, Champion Quince, English Walnuts, Japan Walnuts, Japan Plums, Bartlett and Keiffer Pears, York Imperial Apples. Yours truly,

The Rakestraw=Pyle Co.
Kennett Square, Pa.

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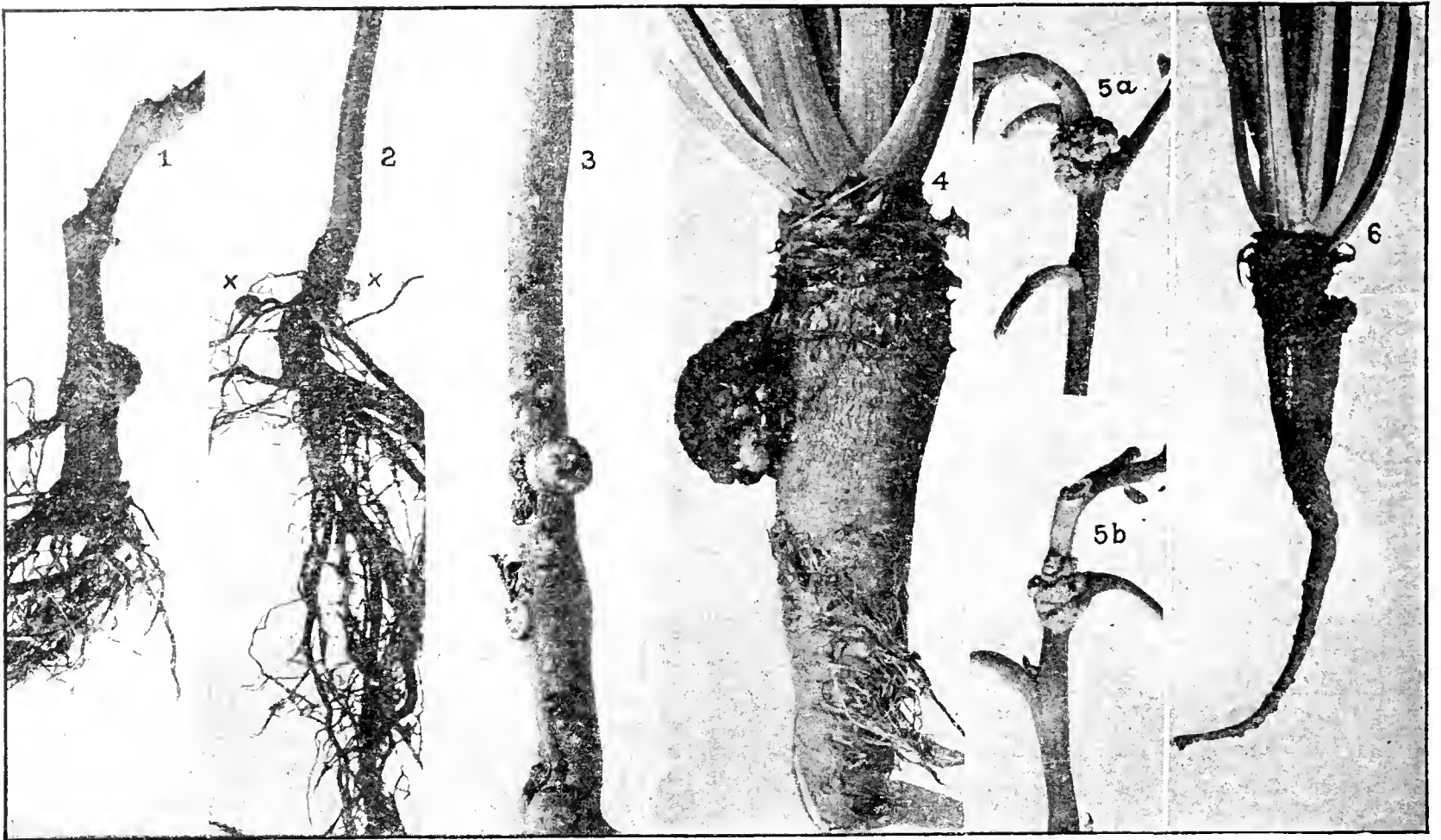


PLATE II. BUL. 213, BUREAU PLANT INDUSTRY, U. S. DEPT. AGR.
CROWN GALL STUDIES

1. Peach on rose, inoculated Jan. 15, '08. Time: 3 mos.
2. Apple on apple. Galls X. X. Time: 2 mos.
3. Hop on tomato, inoculated Nov. 21 '08. Time: 2 mos., 26 days.
4. Chestnut on sugarbeet, inoculated Nov. 13, '08. Time: 33 days.
5. (a, b) Daisy on potato, inoculated Mar. 27, '07. Time: 26 days.
6. Rose on sugarbeet, inoculated Dec. 3, '08. Time: 19 days.

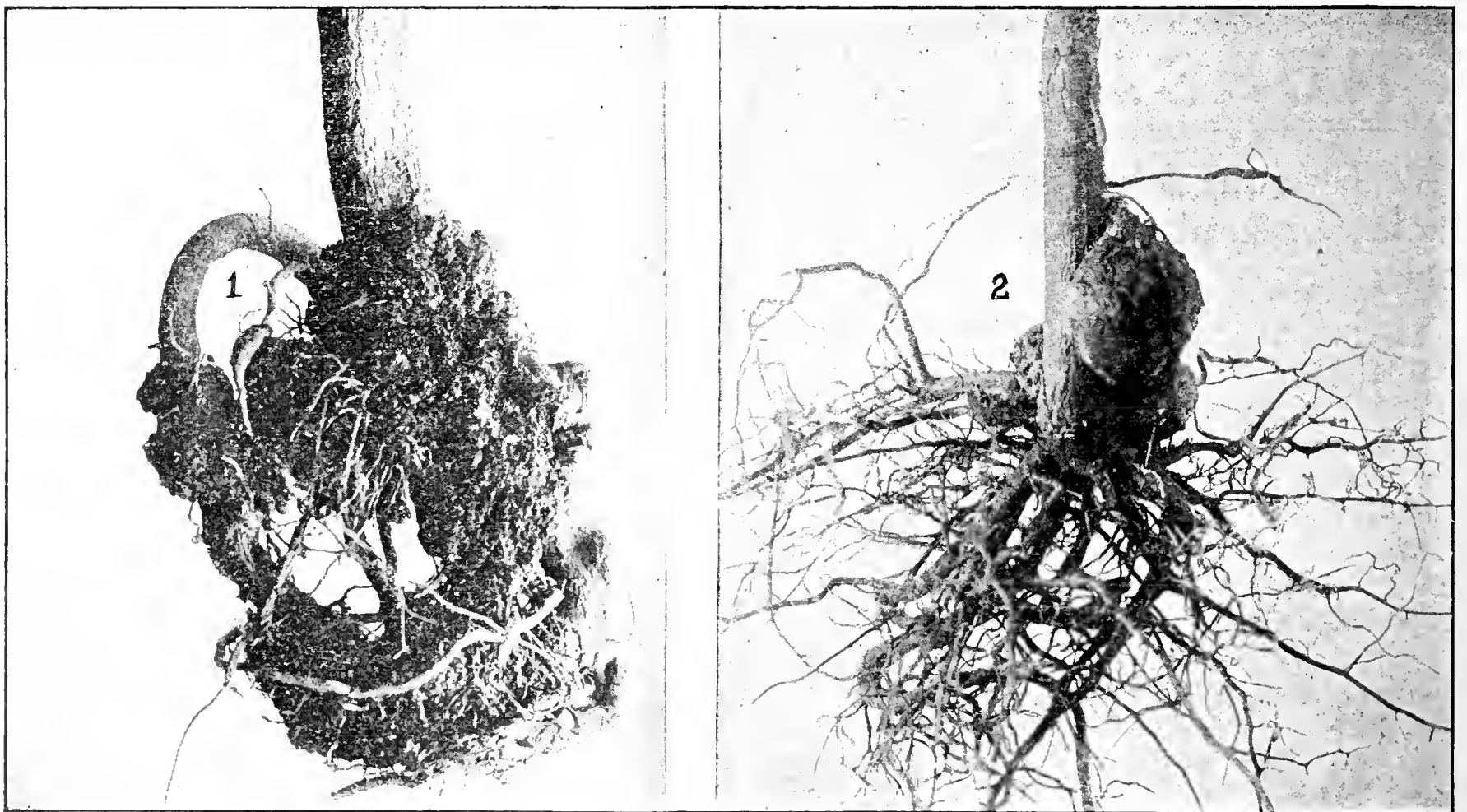


PLATE XV. BUL. 213, BUREAU PLANT INDUSTRY, U. S. DEPT. AGR.

1. Apple on daisy, inoculated Oct. 22, '08. Time: 10 months.
2. Hop on almond (one gall on crown, one on stem above crown), inoculated Apr. 16, '09. Time: 7 months.

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XIX.

ROCHESTER, N. Y., APRIL, 1911

No. 4

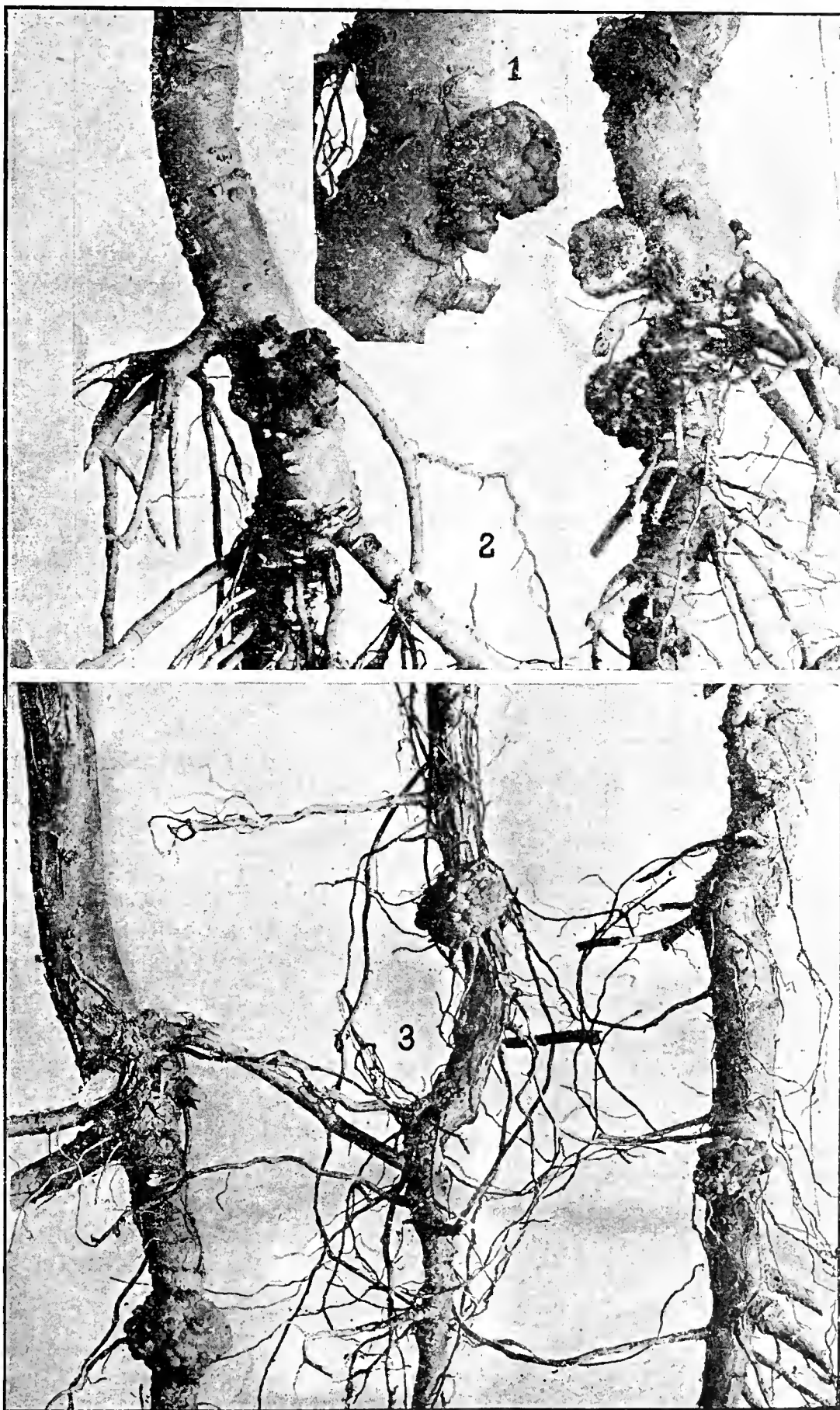
CROWN-GALL OF PLANTS

Caused by a Bacterium; Different Forms Readily Communicable; Causes and Remedy Fully Discussed

Important Bulletin by Dr. Erwin F. Smith, Pathologist U. S. Department of Agriculture

A very important contribution to our knowledge of the nature of this disease has recently appeared from the press of the Bureau of Plant Industry in Bulletin No. 213, under the authorship of Erwin F. Smith, Nellie A. Brown, and C. O. Townsend. This was issued February 28, 1911. It is a bulletin of 215 pages, including the index, and some 36 plates.

This subject is one of great interest to nurserymen. It formed an important part of the discussion at the last annual meeting in Denver, and the information in the nature of experience of nurserymen with the disease contributed by the practical growers was significant and very important. It will be remembered that the Department of Agriculture placed a special agent in charge of the investigation of this disease some six or seven years ago, and that this agent, Mr. George G. Hedgcock, has published two or three bulletins giving the results of his investigations. These studies were not conclusive as to the cause of



the disease, but the last bulletin, a review of which appears in THE NATIONAL NURSERYMAN for January, 1911, presented a number of recommendations based upon the above studies for the control of the disease in nursery and orchard. It did not, however, make any definite statements as to the primal cause of the different forms of the galls. Mr. Hedgcock recommended the use of the best grades of seedlings, the avoiding of blunt ends of the root and scion, and wrapping with unwaxed cloth. He also recommended the packing of the grafts in sand, and the avoidance of those varieties like Wealthy, Yellow Transparent, Wolf River, Ben Davis, and Northern Spy, which appear to be most susceptible to crown-gall. Such precautions as given above were the means of decreasing the percentage of diseased trees some

PLATE XI, BUL. 213, BUREAU OF PL. IND., U. S. DEPT. AGR.

1. Peach on peach; inoculated Dec. 5, '07. Time: 41 days.
2. Daisy on peach; inoculated Apr. 6, '07. Time: 3 months, 6 days.
3. Peach on peach, second series inoculated Jan. 13, '08. Time 50 days.

twelve per cent. This is as far as the investigations of the subject had gone up to the appearance of Dr. Hedgcock's bulletin.

PATHOLOGY OF KNOTS AND TUBERCLES

The present bulletin recites the pathological history of knots and tubercles on the roots and stems of trees in Europe and this country, and arrives at the conclusion that all these knotty growths are the result of bacteria. The discovery of the bacteria was brought about by the examination of marguerites or Paris daisy plants affected with gall-like growths on various parts of the stems and leaves. Galls on this type of plant is a far cry from galls on the roots of apple trees, but the investigators proved conclusively that the bacterium found in these galls was readily communicable to other daisy plants, and, still more surprising, to a great variety of plants in nowise related. Beginning with inoculations on the same type, Dr. Smith tested salsify, potato, tobacco, oleander, olive, various vegetables, grapes, peaches, almond, raspberry, blackberry, chestnut, walnut, and many others. The results of these inoculations were not absolutely uniform. In most cases the characteristic reaction occurred, that is to say, the galls or knots developed but in some cases no growth occurred. Conversely, inoculations from the peach gall were made on the daisy and the knots were thus produced. It appeared easier to inoculate peach from peach galls than to inoculate more distantly related plants. Apples were infected with the knot from peach galls in several cases, as were also red raspberry, black raspberry, rose, magnolia, and red oak. The bulletin gives in detail the actual results covering this work, which has been going on since November, 1904.

SYNOPSIS OF CONCLUSIONS RESPECTING CROWN-GALL

"Crown-gall is a disease common in nurseries on the roots and shoots of various plants, and likely to continue on the plants when they are removed to orchards, vineyards, gardens, and hot-houses. It also occurs on various field crops. This name is used for the disease whatever the situation of the galls on the plant.

The first successful isolations and infections were obtained in 1906, and the biology of the bacterial organism derived from the daisy has been determined more carefully than that from galls on other hosts.

Hundreds of pure-culture inoculations on daisy have removed the subject from the domain of speculation and shown that the galls on Paris daisy are due to a white schizomycete named *Bacterium tumefaciens* (April, 1907).

This organism is a short rod multiplying by fission and motile by means of polar flagella. It can be grown in many sorts of culture media, but does not live very long upon agar. It forms small, round, white colonies in agar or gelatin poured plates. Under unfavorable conditions of growth it readily develops involution forms.

This schizomycete differs from many bacterial organisms in not producing open cavities in the plant. It appears to occupy the living cells in small quantities, causing rapid proliferation.

It produces galls most readily in soft, rapidly growing tissues. Ordinarily, resting tissues can not be made to produce galls. Turnips seem to be an exception.

Cross-inoculation to plants of other families have shown the daisy organism to be capable of inducing tumors on many species in widely separate parts of the natural system (Compositæ to Salicaceæ), these galls varying somewhat in appearance.

Some species of plants were not infected (onion, fig, olive), and possibly are not infectable, but further experiments should be made.

For purposes of comparison natural galls have also been studied on the following plants: Peach, apple, rose, quince, honeysuckle, *Arbutus unedo*, cotton, poplar, chestnut, alfalfa, grape, hop, beet, salsify, turnip, parsnip, lettuce, and willow.

Some cross-inoculate less readily than others, but, in general, the monotonous morphology, the cultural uniformities, and the ready cross-inoculability (daisy, peach, hop, grape, poplar, alfalfa), point to one polymorphic species rather than to several distinct species, but further studies should be made.

The galls also invite various parasites—nematodes, fungous root rot, fire blight of apple and pear, etc., and some of these are able to cause great damage.

We have not been able to distinguish etiologically between *hard* galls and *soft* galls. Even the hardest crown-galls are due to bacteria which closely resemble those found in the softest.

The size of the tumor, other things being equal, depends on how rapidly the plants are growing, i. e., the state of nutrition. Actively growing plants usually developed large tumors when inoculated, and slow-growing plants none at all or small ones; but, as in apple, small slow-growing galls may finally become large. This long-continued growth would not be possible if there were not a very nearly even balance between the stimulus of the parasite and the response of the host.

The apple hairy-root, hitherto a disease of unknown origin and supposed to be noninfectious, has been shown to be due to bacteria which culturally and morphologically differ, if at all, only slightly from the crown-gall organisms.

Typical hairy-root has been produced on sound apple seedlings by pure-culture inoculations, and in the same way on sugar beet both galls and hairy-roots have been obtained.

The disease is one which progresses slowly, stunting the plant first and finally destroying it, unless removed by extirpation or by the development of increased resistance on the part of the plant.

The continuation of rigid State inspection with rejection of diseased nursery stock is recommended."

METHODS OF DEALING WITH THE DISEASE AND RECOMMENDATIONS TO NURSERYMEN

On this subject the authors have the following to say:

"Up to this time the best method of dealing with this disease remains the old one of strict inspection of nursery stock and the condemnation of all trees and shrubs found

diseased. In individual cases this undoubtedly works hardship to the nurseryman, but, on the other hand, to allow him to sell galled trees injures the fruit grower, serves to distribute the infection broadcast, and tends to destroy his own reputation. The nurseryman's remedy lies in careful methods and the abandonment of infected soils.

By no amount of special pleading can it be made to appear that an infectious disease should be tolerated on nursery trees offered for sale simply because it is rather prevalent and is inconvenient to deal with. Before the nurseryman can be allowed to sell such trees without restriction he must establish conclusively that it is not injurious, and not transmissible to susceptible species.

We are disposed to include apple trees also in this recommendation. While these seem to be less subject to crown gall in a serious form than some other plants, frequently they do not make good trees, and our cross-inoculations suggest, at least, that they may serve to carry the disease to other plants and into localities previously free from it. Moreover, even when the apple gall does not itself seriously injure the tree it may serve, as we have seen, for the entrance of other parasites.

In some cases the inspector will be in doubt whether to condemn stock or pass it, particularly when the trees have been carelessly grafted and show more than the ordinary amount of callus. He may then either refer the specimens to some more experienced pathologist or refuse to take chances. Until we know to the contrary excessive callus should be regarded as incipient gall. Ordinarily there will be no difficulty in determining whether or not a given lot of trees has crown-gall or hairy-root, except when the nursery

stock has been dishonestly pruned before shipment to remove signs of the disease, and then usually some traces will be left. In case trees are improperly condemned there is always a remedy at law."

Referring to the article contained in our March issue

regarding the thirty-sixth annual convention of the American Association of Nurserymen, we are able to add a little more information. The official program is not yet compiled but enough has been said by Mr. J. H. Dayton, chairman the committee, to indicate that it will be of exceptional quality. Members, we understand, are to have the great privilege of listening to such distinguished speakers as Professor William Trelease, director of the Botanical Gardens, and to Professor Hunter; also a possible address from ex-Governor Handley. The committee is limiting its part of the program to half-day sessions, and, besides the numbers referred to, will have a few short papers on practical subjects by practical men, with some live discussions.

There will be no railroad certificates, the large guarantee required by the passenger associations making it prohibitive. However, tourist rates will be available from central points, and members

are urged to seek early conference with their ticket agents.

Secretary John Hall will issue the official circular with program as soon as he receives from the various committees the particulars of their departments. In the meantime, he asks that members show their thoughtfulness by sending in their membership dues and also in placing their applications for space in the badge book. His address is 204 Granite Building, Rochester, N. Y.

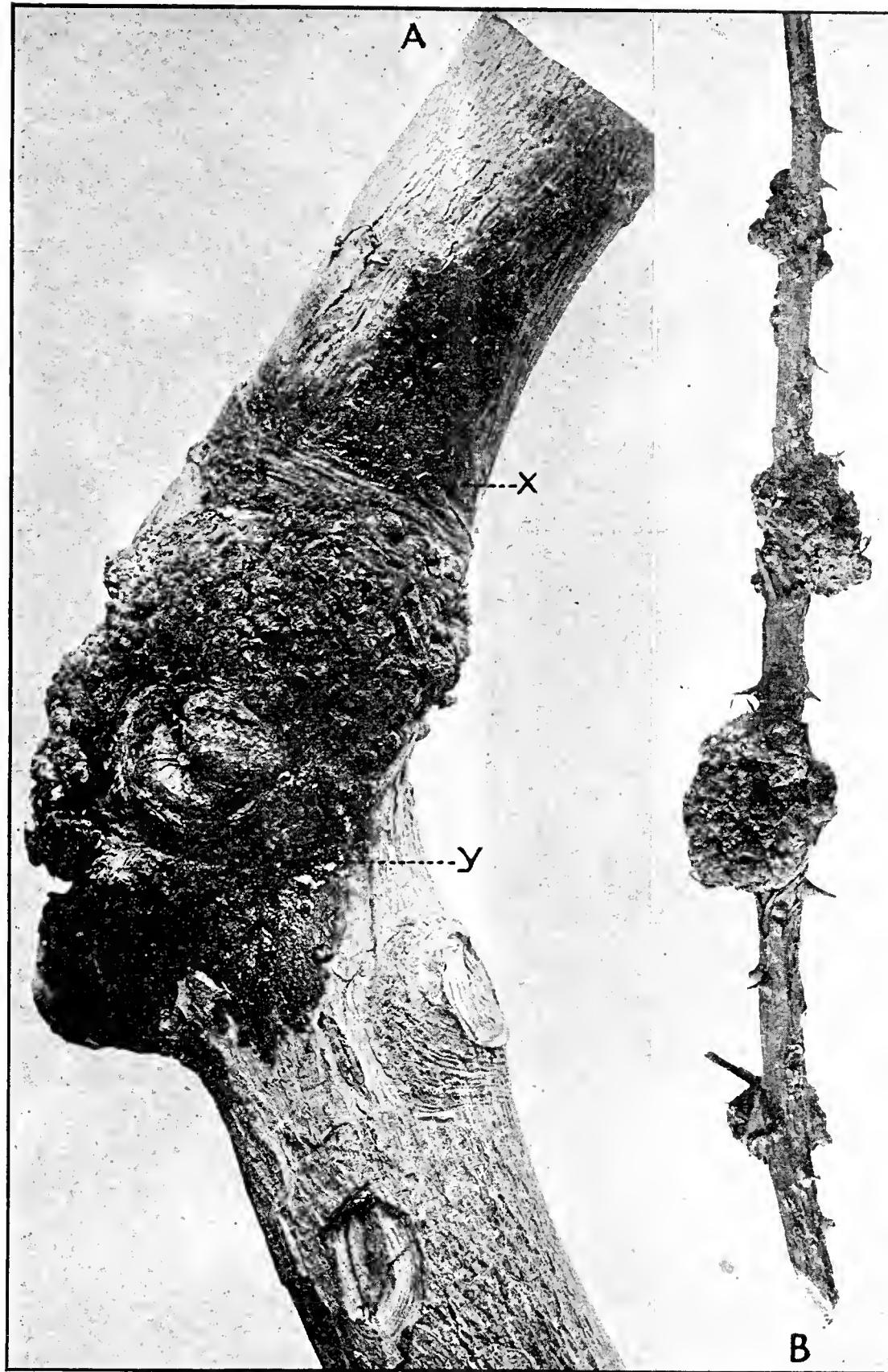


PLATE XXXI. BUL. 213, BUREAU PLANT INDUSTRY, DEPT. OF AGR.

- A. Limb of Spitzenburg apple from Oregon, attacked by a hard gall. Introduced to show a secondary infection by the pear blight organism (*B. amylovorus*) radiating from the gall. X. Y. Blighting areas covered by the bacterial exudate.
B. Destructive galls on blackberry received from Prof. L. R. Jones, Madison, Wis., Autumn, 1910.

THE ADAPTATION OF THE PEAR TO THE MISSISSIPPI VALLEY STATES

Climatic Considerations; Summing up of a Lifetime Experience in Pear Growing in the Upper Mississippi Valley

Charles G. Patten, Charles City, Iowa

So greatly unlike are the climatic conditions of the Mississippi Valley States that, at first thought, it might seem that there is little that is common to the different sections of this region, even if it shall embrace only Illinois, Missouri, Kansas and the Southern half of Nebraska, South Dakota, Minnesota and Wisconsin. However, with the exception of the merest fraction of this immense territory that touches upon Lake Michigan, it has an intra-continental climate, rising from its lower altitudes on its southern and eastern limit from 450 to 600 feet above the sea, and reaching by almost imperceptible degrees to an altitude on the north of about 1500 to 1700 feet, and on the west to a little more than 2000 feet.

The territory embraced by these states and parts of states surpasses in square miles the combined territory of New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, Florida, South Carolina, Georgia, Ohio, and Michigan—a territory unequaled in richness and fertility by any other of like size in our great country and generally of most equable rainfall. A region which combines such wonderful wealth of soil, sunshine, and rain must become the home of teeming millions of people.

THE HOME OF THE CULTIVATED PEAR

Mr. Downing catalogues many hundred varieties of the pear, mainly of foreign origin; but they originated in mild and humid climates, very unlike the climate that we are considering. Many of them were adapted to regions bordering our Atlantic Coast and the Great Lakes, where the

climate, both in winter and summer, is tempered by their moisture laden winds, whereas the region which we are considering is swept by the dry and very cold winter winds from the Northwest, and the hot, scorching winds of the

Southwestern plains. The constitution of the pear has been formed under such radically different climatic conditions that it cannot endure the change. Hence, the "blight" that has almost driven pear culture from the length and breadth of this territory. Added to this unfortunate showing, we are confronted with the fact that not a single variety of the older and better sorts can long endure the winter climate north of latitude forty-two.

EARLY ATTEMPTS AT PEAR GROWING

In the early efforts of pear growing in Northern Iowa, the Flemish Beauty endured the longest, growing in some places to six or seven inches in diameter, well north of the forty-third parallel in Iowa, and bearing fine fruit. Perhaps Seckel, Anjou, Winter Nelis, Howell, and Sheldon stand next in hardiness and first in freedom from blight, though

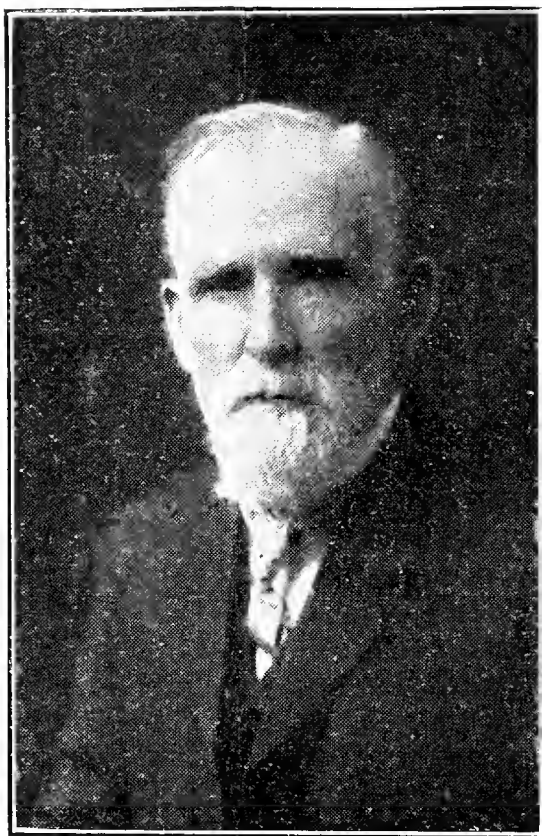
Mr. B. A. Mathews of Southern Iowa advises me that Durand, Koonce, German Sugar, Tyson and Vermont Beauty are worthy of trial in north Iowa for these qualities.

HOME PRODUCTION OF SEEDLINGS NECESSARY TO SUCCESS

There may be a few others that have the qualities of hardiness, goodness, and reasonable freedom from blight, but mention of these will serve to elucidate the real purpose for which this paper is written; to demonstrate the fact

that if pear culture throughout the length and breadth of this Valley is ever made such a success as will adapt it to the needs and ability of the general planter, ITS VARIETIES MUST BE ORIGINATED HERE.

The Burkett pear, originating in Illinois,



CHARLES G. PATTEN
Plant breeder of Mississippi Valley



Brier Sweet X Pound Sweet



Patten Greening X Grimes Golden
SEEDLINGS AND CROSSES OF CHAS. G. PATTEN



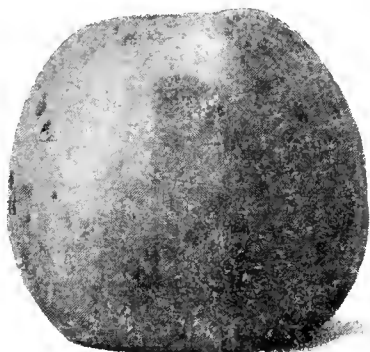
Patten Greening

has resisted the blight for a period of forty-five years in South Iowa. The Fluke, found growing in Davenport, Iowa, when planted on the rich, alluvial soils of Central and Northern Iowa, has proven to be not only more hardy than any of the old varieties, but almost free from blight and of a good dessert quality. The Longworth, also originating at Dubuque, Iowa, has grown here at Charles City and farther north at Osage on the forty-third parallel to be ten inches in diameter and to be nearly the same size up to the forty-fourth parallel in South Central Minnesota. In each case, it is growing on rich prairie soil, where it is practically, though not wholly, free from blight of the smaller limbs. In this connection, it is proper to state that its fruit is not of such quality as to recommend it where the choice varieties can be grown, but its great hardiness makes it valuable in the breeding problem for the north.

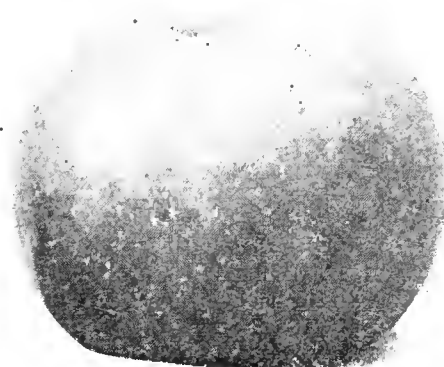
From Prof. J. C. Whitten of the University of Missouri, I learn that the Keiffer is more largely planted in



Silas Wilson



Patten Greening X Roman Stem
SEEDLINGS AND CROSSES OF CHAS. G. PATTEN



Seedling from Patten Greening

The influence of some high quality pear which played a part in the origination of the Keiffer, if its in-bred

his state than all other varieties combined and this, so far as I have been able to learn, is true of all parts of this Valley south of Iowa, the Garber being used as a pollenizer of that variety.

The Keiffer, though blighting somewhat, has great recuperative force, probably drawn from its hybrid character with the Chinese sand pear, and therefore soonest recovers from both summer and winter injury, but lacking here considerable of the hardiness of the Longworth and Fluke, and not as hardy in Northern Iowa as the Flemish Beauty.

Well, I hear some one exclaim, that it is a poor showing for either profitable or high class pear culture in the Mississippi Valley. True, but permit me to state that there is one man in Southern Iowa who grew, two years ago, nearly Fifteen Hundred bushels of pears, and almost wholly of the better varieties as mentioned in this article, and there are thousands of acres in southern Iowa and elsewhere in this Valley where, even under present conditions, with intelligent selection, culture and care, pear growing may be made not only profitable, but highly satisfactory in the quality of its fruit.

But that does not touch the root of the matter as applied to this Valley. As before suggested, the pear, through repeated generations of seedlings in a mild and equable climate, has developed hereditary characters which almost wholly unadapt it in our more rigorous interior climate. So that with us the problem becomes one of adaptation, through the process of selection from the seedlings of our most nearly adapted varieties, in all parts of this territory, bringing to bear also our highest skill in in-breeding, and creating the most promising combinations by cross-pollination.

Fortunately we have advanced so far in our knowledge of varieties and in methods of procedure in this work that the path which leads to success, though long, is not obscure. Nature has been so lavish in the infinity of her variations in plant life, that there is no shadow of an excuse for doubt.

No one can tell what of blight resistance and hardiness, or both, lies hidden in a thousand seeds of the Seckel, the Howell, the Fluke, or other good pears herein enumerated. No one can tell what might be produced by the cross-breeding of these and the Anjou, the Sheldon, the Durand, the Winter Nelis, and other nearly non-blighters upon Burkett, the Fluke, and Longworth. But we know enough of the latent power of heredity so that we can forecast results with a reasonable degree of certainty.

SUGGESTIONS FOR PEAR BREEDING

seeds were planted in great abundance, would give most hopeful assurance of grand results in the development of pears suited to the southern part of the Mississippi Valley.

In considering this subject, we shall do well to bear in mind the fact that luxuriance of growth tends to blight. We have, therefore, a double reason for breeding from such slow growing sorts as Seckel, Fluke, Dix, Rutter and Winter Nelis; as the character of slow, firm growth will be stamped on some of their many seedlings; and through later investigations with the microscope we may be able to predict of a seedling when three or four years old whether the size and firmness of the cells will hinder or perhaps prevent the work of the bacteria.

The states must get behind this work. The life and circumstances of the individual are too short and uncertain to compass the production of varieties which shall satisfy our uncertain cultivated tastes and the demands of our climate. Planters and nurserymen will gladly co-operate, but the State Experiment Stations, backed by the States, must lead in the work, not alone of developing a commercial industry, but also of giving to their citizens, at the earliest possible date, one of the most delicious fruits ever known to a highly civilized people.

We are in receipt of a beautifully colored print of the great exhibition of forced shrubs and plants which will be held from April 5th to the 16th on the occasion of the 50th anniversary of the Pomological Society of Boskoop, Holland. The members of this Society now apply themselves almost exclusively to the cultivation of all sorts of conifers, evergreens and shrubs and perennials for forcing. The exhibition will be highly interesting for the great collaboration of the principal firms of Boskoop and its environs guarantee a complete survey of all kinds of shrubs and perennials for forcing, which are in cultivation in this well known nursery district.

CALIFORNIA CITRUS PROTECTIVE LEAGUE

The general manager and secretary of the California Citrus Protective League has issued an interesting statement regarding the purpose and plans of this organization, designed to promote the citrus industry of the Pacific Coast.

THE ORGANIZATION

The Citrus Protective League of California is a voluntary organization, formed in March, 1906, by representatives of growers, shippers, and shipping organizations in nearly all of the citrus growing localities in the State to handle the public policy questions that affect the industry as a whole. Its purpose is to represent the grower and shipper in handling such questions as: railroad rates and transportation problems; customs tariffs and other governmental relations; State and Federal legislation that applies directly to the business; and all other questions of a general nature that affect the upbuilding of the industry, except the marketing of the fruit.

The League is directed by an Executive Committee of nine and by a Secretary and Manager, the Executive Committee having been appointed by an Administrative Committee of thirty of the principal growers and shippers who act as a governing committee, and who were selected from the representative delegates who organized the League in 1906.

The citrus industry represents from \$150,000,000.00 to \$200,000,000.00 capital invested, 10,000 growers are interested in the cultivation of the fruit, 100,000 people depend on it for a livelihood, and nearly 50,000 carloads are expected to be shipped from the State during the present season. No other agricultural industry in America is so highly specialized. None is more closely tied together by common interests. None is brought more closely in contact with organized business interests from the grower to the consumer, and as a result has larger and more far reaching general questions confronting it.

The League is supported by funds raised by general assessment based on the number of cars of fruit shipped by each member during the preceding year. Fourteen assessments were levied to December 31st, 1910, and \$68,654.88 have been paid in by the members in the five years since the League was organized, of which approximately \$65,000.00 was expended in the management of its business to December 31st, 1910.

THE THINGS THE LEAGUE HAS ACCOMPLISHED

The League has played an important part in the progress of the citrus industry in the past five years, by its work in connection with the reduction in the freight rate on oranges, the change in the refrigeration tariff, the citrus fruit tariff, the citrus fruit customs regulations, and the eradication of the white fly.

PROBLEMS BEFORE THE LEAGUE

The problems before the League at the present time are far reaching in scope. The rate cases will require attention

until they are finally settled. A determined effort is being made by the importers to have Congress reduce the duties on citrus fruits. The League is preparing to meet the efforts of the importers. It will endeavor to safeguard the common interests of the orange and the lemon grower by every honorable means whenever the question of citrus duties is raised, either by the Tariff Board or by Congress.

The League will use every effort to bring to the help of the grower special investigators from the State and Federal Governments to study the diseases, the insects, the soil problems, and other cultural, fruit handling, and fruit transportation problems that affect the industry. It will maintain an agricultural reference library without expense to the grower, and will develop a bureau of information showing the international movement of citrus fruit and other fruits that have a relation to the industry.

Legislation

MONTANA NURSERYMEN ACTIVE

Dear Sir:

I have pleasure in informing you that the Florists' and Nurserymen's Association of Montana has recently obtained some very important amendments to the Horticultural Law of this State.

A clause debarring nurserymen from being represented on the State Board of Horticulture has been cut out, greenhouse plants have been exempted from inspection and provision made for appeal to the State Board of Horticulture against an inspector's decision when necessary. All fees collected by inspectors are now to be turned into the State Treasury; previously the inspectors were allowed to keep \$150 each month as wages.

Previously the law provided for nursery stock grown in Montana to be inspected after it was dug from the rows or grounds, the nurserymen to give five days' notice when the stock was ready for inspection and also after the stock had been inspected to give in writing, with an invoice of the goods being shipped, five days' notice to the State Board of Horticulture before shipping.

This has now been amended and the State Board of Horticulture is to designate the manner and time of inspection in each case and the five days' notice before shipment has, by amendments, been made to apply only to uninspected stock.

There are even yet many objectional and useless features in the Horticultural Law of this State which we hope at some future time to see corrected.

The association is now endeavoring to arrange for competitive florists' and nurserymen's exhibits at the State Fair this year. The annual meeting of the Association will be held at Helena, during Fair Week about September 26th. Mr. W. J. Hugo has resigned the office of secretary and J. W. Mallinson has been appointed to succeed him.

Helena, Mont.

J. W. MALLINSON.

INTERESTING PAPERS AT TENNESSEE NURSERYMEN'S ASSOCIATION

We have already called attention to the valuable paper presented by Pres. W. P. Stark at the above meeting, and we give a summary of other interesting addresses on that occasion, as follows:

"Cold Storage Nursery Stock" was discussed by R. C. Chase of Huntsville, Ala. Mr. Chase said the practice which they had found to work most successfully was to pack the trees in paper lined boxes and put them in cold storage, the temperature of which was kept as near 34 degrees Fahrenheit as possible. He said that cold storage should be as good as "heeling out" trees. They had found it of the greatest advantage and recommended its use to the members of the Association. Following in discussion, Mr. W. P. Stark, Louisiana, Mo., said that cold storage for nursery stock is as necessary as for fruit. It made it possible to do continuous shipping from October to May. They have had a considerable experience and in all cases stock had come out in good shape. S. W. Crowell, Roseacres, Miss., said that with roses they had found cold storage a very important feature in their work.

"Co-operation and Organization" was the next topic. This was discussed in a most tactful and interesting manner by Percy Brown. He spoke of the value that organization had meant to the live stock breeders, foresters, sheep growers and the horticulturists and nurserymen. He outlined briefly the history of the nurserymen's organization which began with fourteen members six years ago, and by close co-operation had resulted in an active and large organization, which was accomplishing great things for the nursery and fruit interests in the State. He spoke enthusiastically regarding the future of the organization, stating that the bee-keepers of the State wanted to co-operate and meet annually with the Association, extending the Convention to a three days' rather than two days' session. He said that the organization should unite their efforts to get a larger appropriation, so that the present duties of the State Entomologist and Plant Pathologist could be continued and further important investigation could be taken up. Under this head, he placed a great importance upon the inspection of the orchards of the State, biological survey of the State, and orchard demonstrations. He said the first thing that was important was the education and this could best be advanced by publishing the proceedings of these meetings. He suggested that a quarterly publication be undertaken by the organization of the Annual Conventions, the succeeding issues be devoted to the fruit, nursery, floral, truck growers, and bee-keepers' interests. He suggested that a page or more be devoted to questions. Following Mr. Brown's talk, discussions were entered into and questions asked; all members being very much interested in the sentiment of Mr. Brown's talk. J. L. Jones moved that a committee of three, with Percy Brown as chairman, be appointed by the President; this committee to thoroughly investigate the matter of an association quarterly. This motion was seconded and unanimously carried.

"Tennessee as a Nursery State" was the subject of a talk given by J. Marvin Miller, and enthusiastically discussed by several members of the association. It was agreed by all that Tennessee is an exceptionally good State in which to

grow nursery stock, and with the splendid railroad facilities which it afforded, it was conceded by all that at least one year in growth of the apple tree would be saved by growing in a Southern State. Mr. Miller said that no other proof was necessary to answer the question than the present number of nurseries in Tennessee, which is 242.

PRESIDENT W. P. STARK BEFORE THE TENNESSEE NURSERYMEN'S ASSOCIATION ON COMMERCIAL ORCHARDING

COMMERCIAL APPLE GROWING FROM THE NURSERYMAN'S STANDPOINT

Commercial apple growing depends on many conditions within our control, as well as upon land and climate. Tennessee's great opportunity is at hand today as never before. The "Back to the Soil" movement is drawing a steady stream of the cities' men and women as well as the cities' gold to the favored producing sections of the country. Only a few years ago there was a mad rush to the city, a greed for the city life, but time has brought a readjustment, the people are anxious to return to nature, and to such people no country appeals more strongly than the mountains and valleys of the more tempered regions of the South.

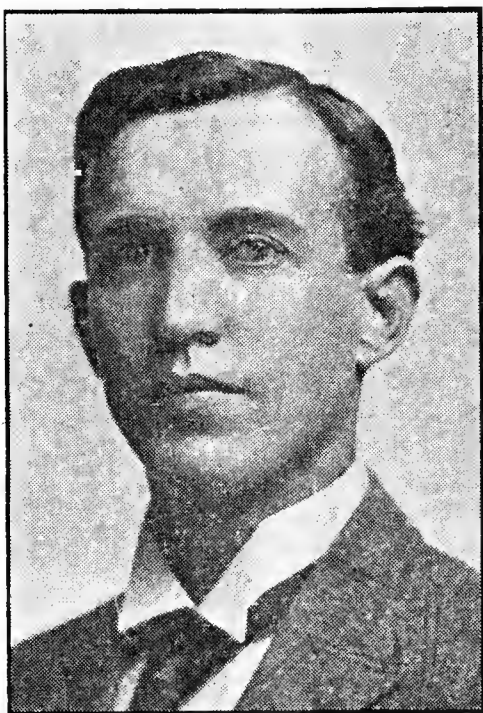
Every agricultural section has had its share of this new development, but the South, because of its great set-back a half century ago and the following period of inactivity, now offers the greatest opportunities to the incoming settler, as well as

to the native born. A wonderful store of opportunities have been allowed to lie dormant for lack of capital and men with the interest to develop it.

Tennessee is peculiarly and favorably situated as to soil and climate, and great as your fruit growing interests are, the industry is in its infancy. The apples of Tennessee were renowned in the days of Andrew Jackson, in the days of the stage coach, because wherever the pioneers went, they carried with them fruit trees and seeds.

Missouri horticulture is indebted to the pioneers of Tennessee and Kentucky for a first start in fruit growing. Personally, I speak advisedly and I may say with pardonable pride, my two grandfathers were Missouri pioneers going from Kentucky and Tennessee after fighting with Jackson in the New Orleans campaign.

Great as has been the success of Tennessee today, yet greater is the future in store. You have just made a beginning. Unfortunately the time was when the average farmer thought there was nothing to do but plant the trees, and let nature do the rest. In days gone by nature was generous, but conditions have changed, and success comes to him who not only plants but sprays, cultivates, and keeps in touch with the scientific and practical organizations of the State, and profits from the experience of other successful fruit growers. The slipshod method must go and the man



PROF. A. I. SMITH
Vice-President for Eastern Tennessee
of the Tennessee State Nur-
serymen's Association

who is not up to date in his methods had far better cut down his trees, otherwise he is a menace and detriment to his neighbors. An orchardist should not plant more than he can properly cultivate; ten, twenty, or fifty acres, well cared for, will prove far more profitable than a hundred not given thorough care.

Only a few years ago there was a mad desire to count orchard trees by the tens of thousands, the ambition being to secure the largest acreage. Many such orchards were a disaster, a monumental failure. The successful orchard, the profitable one, is based on quality rather than quantity.

Tennessee on the map is long drawn out, so to speak, and the adjacent surrounding market is capable of vast consumption, to say nothing of the more distant markets. Some improvements are necessary—increased plantings, associations for the profitable handling of crops, and more varieties—not all Elberta. The early varieties in the more southern part of the state should be planted. There are many varieties hardier than Elberta and others can be developed to meet conditions and requirements.

There is much that might be said in favor of pear growing, more attention should be given to pears. And the plums of Tennessee are becoming a profitable crop. Cherries are also being grown with profit, and they offer an opportunity which has not been fully appreciated.

The commercial apple has undoubtedly the greatest future. There are fruit markets to supply in every direction, and like Arkansas, much of the product may be marketed early in the season before you meet the competition of the far West. Tennessee is famed for the Winesap family, which includes the Paragon, Gilbert, Stayman, and old Winesap. York Imperial will equal those of Virginia. Grimes' Golden is perfection with you, and there are many other varieties commanding more pronounced attention. There is a place for your Jonathan, just as there is a place for your Wealthy, along with Delicious, King David, Black Ben, and others.

To emphasize the importance of growing early varieties of apple, I will quote Mr. Manville, Idaho's noted orchardist, who said the greatest opportunity he knew anything of was growing early apples in Illinois and southward, where they had the cheap lands, cheap freights, cheap labor, no irrigation, etc. The early apple should be grown by the carloads and trainloads, just as Georgia grows Elberta peaches. Liveland Raspberry, Yellow Transparent, Wilson Red June, Early Melon, Duchess, Wealthy, etc., should be planted by the tens and hundreds of acres. In this the South has but little or no competition. (Liveland Raspberry is a vastly improved Transparent—less blight, more beautiful, having rich red stripes, and a more productive apple of the Transparent season).

A long time ago, when the orange was considered a luxury, the statement was made that possibly the apple would command as high a price as oranges. Of late years they have been outselling oranges. Recently Kunze's noted fruit store of Chicago sold Delicious at \$5.00 per dozen for fancy specimens, and the Stayman Winesap which you grow to such perfection at about the same price. Does the price amaze you? If so, we might remind you of the sale of

fancy Tennessee apples and the high prices commanded by your early varieties. Washington County, Arkansas, orchardists have received as high as \$16.00 per barrel for Wilson Red June, and \$14.20 per bushel for Red Bird peach. However, you understand that extreme high prices are not best for the growers, nor best for the consumer. Let it be a "live and let live" policy.

Orchard production today should be far more than a hundred million barrels, and then the average family would be scarcely half provided with this health-giving fruit.

To produce more and better fruit, it is necessary that the industry, as it exists today in your state, be revolutionized. I may say that Professors Bentley, Keffer and others have already wrought a vast amount of good, but the men who are taking the lead need more support. They need the backing of others who are interested, men who will attend the meetings and represent horticulture in the legislature, who will help bring about the proper legislation to promote spraying, supplying fruit growers with information; also secure the appropriation of funds necessary for the work. In the favored West, spraying is often compulsory by legislative act; self-protection demands it everywhere.

Only a few years ago in Missouri, and I judge the same condition will apply to Tennessee, the Elberta industry was seriously handicapped by that scourge, brown rot; but along came that practical and scientific workman, Professor Scott, who did so much for Georgia, for Missouri, and for peach growing regions everywhere. Bulletins are well and good—they are needed, but what the average fruit grower requires is a man of science to come and demonstrate in his own orchard or those of his neighbors. Mr. Hitt, President of the Missouri State Board of Horticulture, says that the Koshkonong country, famous for its peach industry, is a living example of the demonstration work accomplished by Professor Scott. He says they have read and reread bulletins about spraying, but little was accomplished by the communities until Professor Scott came and camped with them, and as a result they are now able to save their crops of peaches which would otherwise be entirely lost. The growers who sprayed for brown rot last year received \$1.75 per carrier f. o. b. for their peaches. But all this will cost money, which must be paid by the State or Government. Money expended in this way is, however, a wise and profitable investment. Therefore, to achieve the greatest success there must be an organized effort for practical application of scientific knowledge by the entire fruit growing community.

The jury awarded William Hallowell \$4,860 damages for twenty-six maple trees which the borough of Conshohocken, Pa., chopped down in opening up Seventh avenue. The trees were planted by Mr. Hallowell half a century ago.—*American Florist*.

NATIONAL NURSERYMAN PUB. CO.,

Enclosed find our check for \$2.00 to renew our subscription to the "NATIONAL NURSERYMAN" for two years. We consider your journal very valuable to our business and could not afford to be without it.

Oregon.

MILTON NURSERY CO.

fruit and Plant Notes

NEW ROSES WORTH GROWING

At the last meeting of the Tennessee Nurserymen's Association, Mr. S. W. Crowell, manager of the United States Nursery Company at Roseacres, Mississippi, presented an interesting and valuable paper on the newer varieties of roses. In this connection, he stated that during the past twenty years, he had grown and tested more than four thousand varieties of roses, including a number of the type species. Among the great finds of recent years were: Cochet, Killarney, and Druschke. The varieties recommended by Mr. Crowell fall under two heads, the hybrid teas and the pure teas. These are probably safe for planting in the region south of Virginia, but of course, could only be grown in the North by protecting with the greatest care during winter. The list recommended by Mr. Crowell is as follows:

HYBRID TEA ROSES

ANTOINE RIVOIRE—The best hybrid tea of its color. Not a new rose but many retail houses fail to realize the value of this variety. There is no garden rose of greater substance. Color creamy white, with delicate pink tinge.

AURORA—Another variety which has been overlooked. An honest rose that is always doing something just right. One of the very best varieties, doing well in all soils. Color, clear bright pink, full and very double, fragrant and constant in flower.

BETTY—A bold rank grower, one of the best fancy colored garden roses. Long pointed buds opening into a perfect formed bloom. Always beautiful. Color, coppery rose overspread with golden yellow, shaded with deeper and lighter tints, which cannot well be described.

CHATEAU DE CLOS VOUGEOT—This variety has a most wonderful color and texture. Color, deepest velvety maroon red, shaded to blackest crimson. Much darker than Prince Camille. Flowers are large and of splendid substance.

COLONEL LECLERC—A very strong grower of branching habit, good foliage, buds borne singly, open blooms of excellent form. Color lovely cherry green.

CASE OF GOSFORD—Salmon pink and rose, base of petals suffused salmon yellow. Very free and distinct.

FLORENCE PEMBERTON—Good grower, splendid buds and open blooms. Color, lively pink, edged whiter.

FLORENCE E. COULTHWAIT—A splendid budding variety, substantial in every respect. Color, deep cream overcast with rose. A unique color.

DEAN HOLE—Intense salmon pink, exquisite bud opening into a mammoth bloom of wonderful substance. An ideal garden rose.

INSTITUTEUR SIRDAY—Deep golden yellow with lighter shadings. Very distinct and valuable.

LAURENT CARLE—Erect grower, branching habit, good foliage, long pointed buds. Color brilliant Carmine.

LA GALISSIERE—Bright deep pink, very free and constant, very double, splendid form and good substance. The only drawback to this variety is the weak neck, cannot support the mammoth blooms. Should be thoroughly tested.

LADY URSULA—Color a most beautiful shade of fresh pink, of good form, very free consistent bloomer. This is one of the best garden roses, being of strong growth without any bad manners.

LA DETROIT—Has proved to be a very excellent garden rose. A good pink of pleasing color.

MAD. JENNY GULLEMOT—The best variety of its color. Buds long and pointed, deep saffron yellow, shaded into deeper shadings. A strong upright grower, free branching habit.

MADAM LEON PAIN—Stocky robust growth, very handsome foliage. Silvery salmon, orange yellow center, reverse bright red and yellow.

MAD. SECOND WEBER—One of the best roses of recent years. Color, rosy salmon, or flesh pink, flowers of perfect formation, very free and consistent bloomer.

MRS. AARON WARD—A most delightful bedder. Color, deep golden orange, shading out to lemon or cream, yellow toward the edge of petals. Good grower and very consistent bloomer. A variety of exceptional value.

MRS. A. R. WADDELL—A strong, rampant grower, heavy, leathery foliage, buds long and pointed, rosy scarlet suffused with old gold, opening into coppery salmon. Open flower very large, semi-double, but lasting. This is one of the showiest roses and is an ideal bedder.

MAY MILLER—Last year's introduction. A very excellent rose, strong growing, free flowering. Back of petals are coppery yellow, suffused with bright pink, the upper surface peach and apricot, shaded fawn.

MAD. PHILLIPE RIVOIRE—Apricot yellow, with lighter center, very free grower and constant bloomer.

MAMIE—A grand garden rose which has been overlooked. Very vigorous grower, constant in bloom, giving flowers of enormous size. Color rosy carmine, with distinct yellow zone. A superb variety.

MAD. CONSTANT SOUPERT—Large buds, sharply pointed and plump. Color deep golden yellow, tinted and shaded with rosy peach.

OLIVIA—A splendid addition to the red section, which needs a greater assortment. Color deep rosy red, resembling Helen Gould in form and color.

PRESIDENT TAFT—A variety of very recent introduction, but it is sure to become a favorite. Color shining, intense pink. Very lasting under all conditions. A splendid grower, good bloomer, and flowers are of good size. This variety should not be confronted with the rose under the same name, which has been introduced from Europe. The latter is of small value.

RHEA REID—This variety is probably too well known to place in this list, however, it may be classed as the best red garden rose introduced to date.

WHITE KILLARNEY—Quite as good as pink Killarney, and will become a standard white for the garden.

WILLIAM SHEAN—Similar in make up to Killarney, holding its color well during hot weather. Worthy of trial.

TEAS

The list of novelties in this section is limited, but every variety noted is distinct and substantial addition to this beautiful type of rose:

BLUMENSCHMIDT—A sport from Mlle. Franciska Kruger, having every good point of the parent variety. Color pure Citron yellow, outer petals edged tender rose. A splendid bedder.

F. VON MARSCHALL—Very bright red, very free constant bloomer. Buds and open flower are equally well formed. A first class rose.

HARRY KIRK—Deep sulphur yellow passing into a lighter shade as the flower opens. Large, full, perfect form, very constant and of good substance.

HELEN GOOD—A sport from Maman Cochet. Pretty well known, but the rose like this type should be planted in every garden. I may be partial to this variety owing to the fact that it originated on my ground at Alpika, Miss., thence sent out by the Good & Reese Co., of Springfield, Ohio. Yet, in every respect it is as good as Maman or White Cochet, the same vigor and freedom of bloom, and of its color, no rose to my knowledge is equal to it. Color is a delicate yellow suffused with pink, each petal edged deeper.

MAYFLOWER—Creamy white, edge of petals laced lavender pink. Buds are long and pointed. Of splendid vigor and constitution.

MOLLY SHARMAN CRAWFORD—A white bedder that will stand in the front rank of good garden roses when well known. The color is

(Continued on page 142)

HORTICULTURE IN JAPAN, AS SEEN BY AN AMERICAN NURSERYMAN

By E. F. Coe

RECEIVED

The old style gardening methods and the unpopularity of fruits as an article of food together with the lack of any quick methods of transportation did not make a combination calculated to encourage the development of large nursery interests in Japan under the old régime. Conditions are rapidly changing, so rapidly in fact that "picturesque old Japan" bids fair to soon be a thing of the past. Western methods of living are being adopted very rapidly. The use of tree fruits is becoming very general for food, so that large areas are being planted to Apples, Pears, Plums, Peaches, Persimmons, Cherries, Grapes, Oranges, etc., while berries of all kinds are not being neglected. Re-forestation of the mountains where careless lumbering in the past has done much mischief, is going on on a large scale.

The demand for Ornamental Nursery stock is now large. Many new large fortunes are being made, calling for many new estates which, while largely developed along time honored Japanese landscape lines mostly show the influence of western methods with the materially increased use of ornamental stock. The cities especially the larger ones are making rapid modifications, making them more and more in line with western ideas which calls for an increased demand for street and park trees, etc. An export trade has also developed for Japan's many attractive trees and shrubs which is undoubtedly rapidly increasing.

All these active forces together with good transportation facilities have encouraged the nursery business to rapidly develop within the last few years until now it has assumed large proportions in certain favored sections especially in the near vicinity of Yokohama, Tokyo, and Osaka. Today, large quantities of small forest trees, ornamental evergreens, fruit trees, etc., are being propagated by very much the same methods that are in popular vogue both in America and Europe; and also large quantities of the picturesque dwarfed and much twisted flowering shrubs and evergreens in pots so popular with the Japanese for forcing and house decoration are being raised, but as most of this special stock demands much individual care and attention its culture is largely in the hands of small growers who can afford to give it the extra care this class of stock demands.

The Japanese are now rapidly realizing the importance of watching out for plant enemies. The Experiment Stations are doing good work along this line and enjoy the co-operation of the important nursery interests. Stringent laws will undoubtedly soon come into effect with the purpose of controlling such matters along similar lines to those being adopted by other countries. All in all, the nursery interests in Japan appear to the writer to have a bright future.

New Haven, Conn. THE ELM CITY NURSERY CO.

WHOLESALE AND RETAIL

Editor NATIONAL NURSERYMAN:

Sir:—Your March number, as usual, seems to be full of interesting matter.

There is one article on page 104 in regard to wholesale nurserymen publishing their prices in periodicals and advertising mediums, which puts us in mind of a good deal of talk during the past few years at our conventions, when many wholesale nurserymen have expressed themselves strongly against wholesalers furnishing planters with their trade lists.

Our attention has been called during the last few days to three different cases where wholesale companies have given planters the benefit of their lowest wholesale rates as sent out to dealers and in one case besides giving the lowest wholesale price as published, have offered to pay the freight on goods which was in the neighborhood of a thousand miles distant from their place of business.

It seems to me that it would be just as well to drop this subject and quit talking about it or have some understanding about furnishing members with names of the firms making such offers.

We do know that some wholesale concerns refuse to send out their lists to planters, but certainly if it is fair for one, it is fair for all.

Yours truly,
T. J. FERGUSON.

NEW ROSES WORTH GROWING

(Continued from page 141)

very pure and chaste. Flowers of good substance and form. Very vigorous branching habit. An ideal rose.

MRS. DUDLEY CROSS—Apparently an improved Marie Van Houtte. Buds extremely large, well pointed, opening into a mammoth bloom that stands the sun well. A vigorous grower and very constant.

MRS. EDWARD VICARS—Bright carmine shaded rose. A very promising variety.

MRS. B. R. CANT—Not a novelty, but the trade has the habit of overlooking good things every now and then. One of the very best garden roses extant. Color dark carmine, flushed crimson. Very free and constant, rank grower and about the best of its color.

PAULA—A vigorous free flowering variety of erect habit. Color sulphur yellow, with deeper center. Of very recent introduction, but it promises well.

W. R. SMITH—Like Helen Gould this rose is of such exceptional merit, but it may be well to include it in this list, as many nurserymen are not acquainted with it. It is much like the Cochet in growth, vigor, freedom and formation of flower. It ranks with the Cochets and Helen Gould, and this is the greatest praise that any garden rose can receive. In color it is rose pink, salmon pink, shaded with flesh, and various light tints, which make a combination difficult to describe.

A PRACTICAL METHOD OF INSPECTING IMPORTED SEEDLINGS

In view of the widespread interest relative to methods of inspecting imported nursery stock, more particularly fruit seedlings, the following by Prof. T. B. Symons of the Maryland Experiment Station is apropos and valuable.

The question of properly inspecting the large amount of imported trees, plants, seedlings, etc., that are now received annually in our several Eastern States particularly, and, in fact, throughout the country, due to finding the hibernating stages of the Brown Tail and Gypsy Moths, as well as other pests, is one that has taxed the resources of State Inspectors, who are provided with limited funds for such work. Indeed, I admit that I was ignorant until the past two years of the large amount of such stock that is imported into this country.

With a view of stimulating a discussion of the methods employed by the different Inspectors and to show how this work is being handled in Maryland, this brief paper is presented.

AMOUNT OF STOCK IMPORTED

During the last spring the following approximate amounts and character of stock was imported by persons in Maryland:

2,302,300 French fruit stocks.

754,417 Holland fruit stocks.

149,325 Holland ornamentals.

10,000 French ornamentals.

Total: 3,216,042 seedlings, plants, trees, etc.

This does not include a quantity of herbaceous and florists' stock that was also imported. However, until this fall no attempt has been made to inspect some classes of this stock. As is quite general, I presume, the large majority of this stock is imported by nurserymen and wholesale dealers. Moreover, the bulk of this inspection has been up to this time seedlings of apple or allied plants.

In making arrangements for this inspection, it was first thought best to employ the local inspectors and send a gang of ten or twenty to a place to go over carefully the large shipments of seedlings that were being received by different parties in the state. Upon a further consideration of the case, after consultation with the importers, it was found that the usual practice of growers was to carefully handle the seedlings, trimming both ends, and either place them in sand for a time or plant them in the field immediately. It was also learned that the seedlings should be handled as little as possible, as exposures to air or added moisture would cause opposite but unfavorable conditions. The nurserymen desired that the seedlings be handled but once, if possible. The question to be decided was one of practicality versus theory: Whether we should inspect the seedlings by a score of inspectors at great expense, encountering the difficulties attending such operation, especially the unfavorable conditions of inspecting the seedlings when

more or less packing was attached to them and placing them back in boxes, or inspect the seedlings after the nurserymen had pursued their usual course in handling and trimming and preparing for heeling in sand. Especially did the latter method appeal to me, as it was decidedly the most economical, and I think more effective. Our present method of inspecting large quantities of seedlings is as follows:

The nurseryman or grower provides a clean space in packing shed and his force of men are put to work in trimming the seedlings. These men are under the supervision of a personal assistant from the office who inspects all the seedlings after they have been trimmed. Instructions are given all the men to pull off all old leaves or anything that is attached to the individual seedlings. All found bearing a nest of Brown Tail Moth or other suspicious cocoon or egg mass are thrown out and destroyed by the inspector immediately. All packing is also destroyed and boxes properly treated by the inspector. Every precaution is made to keep everything of a waste character in the given space, so that no opportunity is given for anything to escape. One inspector can carefully examine seedlings from thirty or forty men after they have been put in a convenient shape for handling.

Thus one man has been made to properly care for inspection of an enormous amount of stock at one place. The inspection has not interfered with the routine of nursery work, and the whole has been taken care of at a minimum cost.

One of the greatest difficulties is the proper inspection of consignments to department stores, auctioneers, etc. During the past year a quantity of miscellaneous ornamental stock has been received by such parties in Baltimore. In such cases the conditions are not as favorable for thorough work as at the nurseries. It is a question if such stock consigned to parties in the immediate vicinity should not be inspected at a quarantine station.

In performing our duty as State Inspector, I believe we should stand firm on our requirements, for the best interests of all concerned; but I believe we should be as practical as possible in devising methods, so that such provisions may be successfully carried out.

We must maintain the confidence and co-operation of both the grower and nurseryman. Nothing will so easily dispel this confidence or lessen a co-operative spirit among growers as lack of efficiency in work undertaken, due to impractical or costly methods of procedure.

The auto truck is finding a place in nursery work. We note that the Jewell Nursery Company of Lake City, Minnesota, has recently installed one of these motor trucks for use in its nurseries. There is no doubt that there is a large field for the employment of this sort of transportation within the boundaries of the extensive nursery institution, but with the introduction of the truck must come the improvement of the roads.

The National Nurseryman

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AWARDED THE GRAND PRIZE AT PARIS EXPOSITION, 1900

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ROCHESTER, N. Y., APRIL, 1911.

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TRADE OPPORTUNITIES—Jefferson Thomas, Harrisburg, Pa.
NURSERYMEN'S SHARE IN CIVIC IMPROVEMENT—J. Horace McFarland, Harrisburg, Pa.
ROOT-KNOT—E. A. Smith, Lake City, Minn.
MEMBERSHIP—John Watson, Newark, N. Y.

- STATE AND DISTRICT ASSOCIATIONS.
- American Nurserymen's Protective Association—President, R. C. Berckman, Augusta, Ga.; secretary, Thomas B. Meehan, Dreshertown, Pa. Meets annually in June.
American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.
Association of Oklahoma Nurserymen—President, J. A. Lopeman, Enid, Okla. Terr.; secretary C. E. Garee, Noble, Okla. Terr.
Canadian Association of Nurserymen—President—E. D. Smith, Winona; secretary, C. C. R. Morden, Niagara Falls, Ont.
Connecticut Nurserymen's Association—President, C. W. Atwater, Collinsville, Conn. Secretary, John S. Barnes, Yalesville, Conn.
Eastern Association of Nurserymen—President, Wm. Pitkin, Rochester, N. Y.; secretary-treasurer, William Pitkin, Rochester, N. Y. Meets annually in January.
National Association of Retail Nurserymen—President, Wm. Pitkin, Rochester, N. Y. secretary, F. E. Grover, Rochester, N. Y.
National Nurserymen's Association of Ohio—President, J. W. McNary, Dayton, O. secretary, W. B. Cole, Painesville, O.
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Pennsylvania Nurserymen's Association—President, Samuel C. Moon, Pa., secretary, Earl Peters, Mt. Holy Springs, Pa.
Southern Nurserymen's Association—President, R C Berckmans, Augusta, Ga. secretary-treasurer, A. I. Smith, Knoxville, Tenn.
Tennessee Nurserymen's Association—President, A. I. Smith, Knoxville, Tenn.; secretary, G. M. Bentley, Knoxville, Tenn.
Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.
Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans. secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

ST. LOUIS CONVENTION

A prominent member of the American Association of Nurserymen, writing the editorial office, dropped some excellent suggestions regarding the forthcoming convention at St. Louis, which we are glad to present to our readers for their consideration.

The writer emphasizes the business side of the convention; not merely the opportunity of the members to promote personal business but mainly the opportunity for business of the co-operative type, that which will further the welfare of the nursery craft as a whole. He believes in the convention as a place where "hard, consecutive work for the good of the Association" should be performed. On this side of the question, much should be done towards securing satisfactory understandings in reference to prices of staple lines, and plans for extending trade should be thoroughly considered. These are all good points.

On the social side, our correspondent recommends the appointment of a committee for the purpose of developing the fraternity spirit, by making nurserymen acquainted with each other through desirable types of entertainment. Particularly does he point out the important fact that relationships between the members of the different sections of the Association, as the East and the West, the North and the South, should be strengthened in every way possible. This is to suggest that our members take a personal interest in the forthcoming convention, with a view of presenting notions as to its conduct before rather than after it has taken place.

FUNGICIDES

No one interested in fruit growing can fail to be tremendously impressed by the rapid progress made in recent years in combating the fungous pests of the orchard. It is less than a score of years since Bordeaux mixture was generally recognized in this country as a specific against parasitic forms of plant life. Its popularity grew rapidly. In the last five years, however, a return has been made to a really older type of fungicide, namely, the sulphur compounds. These have been used in one form or another for many years, and on the Pacific Coast they were employed for scale long before Bordeaux became popular in the East. The lime-sulphur mixtures, either home-made or in proprietary form, are now being widely employed.

It is fair to say that much of the progress which has marked the introduction of the spraying methods is to be credited to the commercial manufacturer, as well as the experiment station investigator and practical orchardist. Prominent among the men who have worked energetically and intelligently for progress in spraying is the B. G. Pratt Company of New York. Mr. Pratt has studied the question from the standpoint of the chemist, as well as the orchardist. His insecticide, known as scalecide, is deservedly popular, and he has now contributed a sulphur mixture for the prevention of fungous diseases, under the name of sulfocide. The experiences of various orchardists who have been experimenting with this sulphur compound are given in a little pamphlet which the B. G. Pratt Company is distributing. All persons interested in this newer type of fungicide should

write to the B. G. Pratt Company, 50 Church Street, New York, for copies of the booklet. The senior member of this firm presses a vigorous campaign, and his methods are characterized by a desire to deal fairly and generously by the public.

ORCHARDING EAST AND WEST

“While in the East last year the editor visited a large apple orchard which produced its first crop at twelve years of age, and was told that generally apple orchards in the Eastern States, with the exception of some few varieties, do not begin to bear until they are twelve years old.

This gives a little opportunity for mental arithmetic. If land in the East costs \$100 per acre and it costs \$25 per acre per year to care for an orchard, expenses being about the same in the East as in the West, and you have had to care for it for eleven years before it begins to bear, it would cost a man \$375 per acre at bearing. This would not include living expenses, taxes or interest. Good fruit land in the Northwest can be bought for \$200 and less per acre. Care for six years at \$25 per acre would be \$150, making a cost of \$350 at the end of six years. Net profit has been on an average, and will be in the future, in all probability, in good fruit districts:

Net profit at 6 years of age	\$100
Net profit at 7 years of age	200
Net profit at 8 years of age	300
Net profit at 9 years of age	400
Net profit at 10 and 11 years of age	500

Total profit at beginning of twelfth year ..	\$1500
Less the cost of the land and caring	350

Leaving a profit for the eleven years of .. \$1150

On the other hand, in the East at the beginning of the twelfth year you would be out on your investment and care \$375, whereas in the West, at the beginning of the twelfth year, you would have all the money invested out, and \$1150 to the good per acre.

Which is the best place to engage in fruit growing, East or West?” *Better Fruit.*

In answer to the foregoing, we would say that our worthy contemporary was badly informed. It is approximately true that on heavy clay soils and under old and now practically obsolete methods of orcharding, and with the slower bearing varieties, such as Spy and Baldwin, orchardists were not seriously disappointed if they had to wait ten or twelve years for a commercial crop of fruit. But methods have changed, and view points have changed, and this is not the modern eastern expectation. A properly cared for orchard of Greening, Hubbardston, and Baldwin, in Western New York is known to produce practically as freely and as early as the recognized precocious types like Ben Davis and Winesap, extensively grown in the West. The notion that one must wait ten or twelve years for a crop belongs to past experience and former methods, and our worthy editor was evidently in the hands of a well intentioned and easy “has-been,” while studying methods of fruit growing in the East. The man who sets permanent trees of the slower bearing types, such as Spy and King, is wise enough to interplant these with early bearing varieties, and his ground becomes dividend-bearing by reason of its apple crops after the fourth or fifth year.

The writer of the article above ought to make another visit for the purpose of discovering the modern orchardist, and noting up-to-date methods. If this were done, he would have no difficulty in discovering data which would enable him to very completely and radically revise his preconceived notions, as set forth in the article above.

Personal Mention

MR. E. F. COE IN THE ORIENT

Mr. Ernest F. Coe and Mrs. Coe of New Haven, Connecticut, are making a tour of Japan and the Orient this winter. Mr. Coe is taking occasion to study Japanese horticulture with special reference to those native plants of probable value to this country.

A post card from San Paulo, Brazil, under date of February 8th, informs the editorial office that Mr. J. McHutchison of McHutchison & Company, Importers, 17 Murray Street, New York, is heading south on a winter tour. He reports a good time and good weather, and expects to stop at Montevideo, Uruguay, a few days later.

Our Exchanges

Highlands, Calif.—Walter S. Corwin, pioneer fruit grower of Highlands, is the originator of the pecan industry here. He recently purchased 100 acres of land near Lankershim and has a large consignment of pecan trees on the way from Texas. The entire 100 acres will be set out to pecans at once.—*New York Packer.*

THE RASPBERRY-STRAWBERRY

A new berry is being grown in Logan County, Ill., which it is said bids fair to revolutionize the berry industry in that state. The new production is called the Yankee Prince raspberry-strawberry, and is, as its name indicates, a cross between the red raspberry and the strawberry. The origin of the berry was accidental, no effort having been made to produce a cross. The new berry is said to be very large, resembles the red raspberry in surface, but has the shape and size of a large strawberry, though the center is hollow like the raspberry. It grows on a thorny bush and is declared to require no cultivation. The vines are mowed close to the ground either late in the fall or early in the spring and the new shoots that come up bear the same season. Weeds do not seem to bother, as the shoots grow so rapidly as to kill them out. The plants begin to bear about the same time as the strawberry and continue to fruit until late in the fall.—*California Fruit Grower.*

Note—This has a suspiciously familiar sound. We would not be taking serious chances if we wager that it was the old strawberry-raspberry masquerading under a new guise. This northern Japanese form of *Rubus roseifolius* bears beautiful, large-sized berries, absolutely worthless from the eating standpoint, but the plant is quite worthy of a place in the garden as an ornamental. We are fearful that it is the old humbug making another round.

Correspondence

THE ORCHARDIST AND THE NURSERYMAN

EDITOR NATIONAL NURSERYMAN:

Dear Sir: I have read with much interest your article on the action of the New York State Fruit Growers' Association, relative to the formation of a protective association to protect the members against dishonest nurserymen and dealers.

This matter is directly along our line. You will doubtless remember when our Company was organized it brought out much comment, for it was for this express purpose that this Company was formed. We have among us and in fact every dollar's worth of our capital stock is owned by actual fruit growers who entered our Company for no other purpose than to secure trees which were reliable.

The matter of the guarantee was about the first thing to be brought up, and not two per cent. of the members would consider anything but an absolute guarantee, until they were made thoroughly familiar with propagation methods and the extreme necessity of careful, accurate work in order to prevent mistakes. When the whole matter was fully demonstrated to them, and the fact that all concerns were obliged to purchase more or less stock to complete their assortments and fill orders as given, which naturally involved not only the skill of the individual propagator but all of his assistants, and the integrity of all concerns from whom he was forced to buy, they became as strongly opposed to a guarantee which would raise the liability above the price received, as they had been in favor of an absolute guarantee before they were made familiar with the volume of work and necessary possibilities of intentional mistakes. Such is human nature!

Were fruit growers and nurserymen more familiar with the conditions under which the other fellow works, there would be a better feeling and less talk of the dishonest nurseryman.

Our members at first thought nursery stock could be grown under organization at a great saving in cost. They are now willing to pay a fair price for a good article, and do not jump at every unscrupulous dealer's offer, who is dependent on making up his orders from the surplus stocks left over after the honest nurseryman has filled his orders.

It is true that we give a stronger guarantee than common. We guarantee to replace free of charge or refund the purchase price of trees which prove untrue, at the option of the purchaser, and we further obligate ourselves to be willing and able at all times to show plainly where all goods came from, and that they were delivered by us as they were received.

The farmer's best protection is to stop quibbling on price and procure his goods of the most dependable nursery he can find.

THE WOLVERINE CO-OPERATIVE NURSERY CO., Ltd.
Paw Paw, Mich.

A UNIQUE TYPE OF NURSERY WORK

EDITOR NATIONAL NURSERYMAN:

Dear Sir:

My line is different from the regular nursery. I am a collector and grower of native plants. I either buy or lease a tract of wild land, that is covered with a growth of rhododendrons, kalmia, or azaleas; I then clean the land, cutting everything except the large trees, and burn all the brush. This I usually do in the winter, when there is a little snow on the ground, so the fire won't run. I then have to wait from three to five years for the plants to grow, in the meantime keeping the brush away from the young plants. In this way I can raise fine bushy second growth plants, that will come up with a good ball of earth, and stand transplanting.

I have followed this business for the past eight years, and always invite prospective buyers to come here and look my stock over before buying. In that way, I have dealt with some of the largest nurserymen and landscape gardeners of the country.

I am writing this and inclosing one of my price list cards, thinking that you might be interested to know the kind of business your new advertiser and subscriber is doing.

Very respectfully,

Callicoon, N. Y.

C. G. CURTIS.

OREGON FRUIT GROWERS ACTIVE

EDITOR NATIONAL NURSERYMAN:

Dear Sir: I am mailing you under separate cover copy of our second printed report, containing papers and proceedings of our twenty-fifth annual meeting.

We held during the meeting the largest and most successful Apple and Fruit Show ever held in Oregon, there being several carloads on exhibit. Among the largest prizes were two for \$250 each, one offered by Louis W. Hill, President of the Great Northern Ry., and one by Howard Elliott, President of the Northern Pacific Ry. The sweepstake prize of \$250 was won by Hood River; the Hill prize by The Dalles, and the Elliott prize by Hillsboro.

Last year for the first time other states were allowed to compete at this All Oregon Apple Show, and in November, 1911, we expect to have a display that will be representative of the entire Northwest, as competition will be open to *all fruit growers*, no matter where situated.

I will be pleased to place you on the mailing list for all circulars, programs, and printed matter, if you are interested, and will be pleased to have you publish any of the articles in the report that will be of interest to your readers. In case you desire information regarding horticulture in Oregon, I will furnish it to the best of my ability at any time either to you or any of your subscribers.

F. W. POWER, Secretary.

Oregon Hort. Society.

Doings of Societies

On February 22, a tri-county pomological meeting was held at Hartford, Michigan, under the auspices of the South Haven and Casco Pomological Society. The Michigan Original Fruit Belt Association met with this society, and the two were united into a federation largely for educational purposes. It is interesting to note that the chief subject of discussion was on fruit packages, inasmuch as Michigan now has probably less uniformity in her packages than any other state. The new association has the following officers: President, R. H. Sherwood; vice-presidents, C. E. Bassett, C. W. Wildy, George Friday; secretary, Robert A. Smythe; treasurer, Hon. C. J. Monroe.

SOCIETY FOR HORTICULTURAL SCIENCE

"Factors Which Determine Color in the Forcing of Roses," by M. A. Blake, of New Jersey, was an interesting paper. The varieties studied were American Beauty, Killarney, Bride, Bridesmaid, My Maryland, and Richmond. These varieties represent three colors, namely, red, white, and pink. Mr. Blake made the point that the trade prefers pink and white roses to all other colors. The deep pinks are the most popular. In the variety Killarney, which is now replacing Bridesmaid, the deep, rich pinks represent the desired types, but this variety has the defect of showing considerable variation. In this respect it resembles My Maryland, and the latter is influenced by the conditions under which it is grown. The New Jersey Station has studied Killarney and My Maryland, and has ascertained that the characteristic tints vary from light to a deep pink, according to the environment under which they are grown. In the case of My Maryland, the experimenter discovered that sunlight was essential to the development of characteristic deep tints. Whether this was the only factor necessary to the development of the desirable tints is still an open question. It was found that in the poorly lighted months of December and January, that if the soil was kept wet and the ventilation insufficient, the growth was soft and the flowers of both Killarney and My Maryland under size and poorly colored.

Applications of high grade sulphate of potash upon My Maryland roses at the New Jersey Experiment Station showed no influence upon the color of the roses in cases where sufficient quantities of nitrogen and phosphoric acid were supplied, coupled with other suitable greenhouse conditions.

SELF-STERILITY OF ROTUNDIFOLIA GRAPES

F. C. REIMER

The following is a summary of a paper on this subject given at the recent meeting of the Society for Horticultural Science in Tampa, Florida:

The Rotundifolia grape is a fruit of considerable importance in North Carolina. Mr. Reimer has been studying the peculiarities of this grape for some years, and in a paper under the above caption added a considerable amount of interesting information to our knowledge of this crop. The

self-sterility of the grapes was tested by the bagging method, and he clearly proved that the species is practically self-sterile. These studies cover the James, Thomas, and Scuppernon varieties. In germinating tests made with the pollen of the cultivated varieties, it was found that most of it is practically worthless. Not a single pollen grain germinated, except such pollen as was taken from male vines. Mr. Reimer showed, however, that if only one flower in every twenty-five would develop a normal berry, the yield would yet be at the rate of 250 bushels to the acre. This is explained by the fact that the blooming season lasts a whole month. If a single berry developed in every flower, the yield would amount to 6479 bushels per acre. It was found that no productive vines are ever found in regions where male vines do not exist. In the upper Piedmont region of North Carolina, the variety is unproductive because of the scarcity of wild male vines in that section. The speaker has made a long and scrutinizing search for valuable cultivated and wild vines of this rotundifolia race. As a result of his search, he has found one wild vine which in his opinion may become the progenitor of a new race of rotundifolia grapes. This vine has unusually large flower clusters, produces long, upright stamens, and an abundance of fertile pollen. The vine is being carefully cultivated and studied with a view of propagating, should its good qualities be retained and transmitted.

SOME EXPERIMENTS WITH PRESERVATIVES FOR RETAINING THE SHAPE AND COLOR OF STRAW-BERRIES

W. R. BALLARD, COLLEGE PARK, MD.

In a paper written for the Society for Horticultural Science, the writer describes experiments which were instituted in the spring of 1906, by Mr. M. N. Straughn at the Maryland Station, and since carried on by Mr. Ballard, himself. It is desirable to use wide mouthed bottles with glass stoppers, and perfect specimens with good color, but not too ripe, should be selected, picked with the stems on to facilitate handling.

The method followed was to dip the berry quickly in the melted paraffin, which, after hardening in the form of a thin film, helps greatly in retaining the normal shape of the fruit. In some cases the paraffin was colored red with aniline dyes, which, it was found, helped to conceal the film, but tended to darken the seeds. On the whole, the latter method seemed more satisfactory. The specific gravity of the preserving solution should be such that the berry will sink in it, leaving no part exposed. Berries placed in glycerine became shriveled, due to extraction of water, while in some other fluids the berries took up too much fluid and burst. A ten per cent. solution of formalin was satisfactory where only the shape of the fruit was to be retained.

Alkali solutions soon destroy the color of the berry. Alcohol and formalin were used as a basis of most of the solutions, but either alone gave a dark, purplish red color. The most satisfactory solution used was equal parts of ten per cent. solution of formalin and acid potassium sulphate, and it was not necessary to keep the specimens in a dark room.

Tariff

August Rölker & Sons, importers of horticultural goods, 31 Barclay Street, New York, send us the following interesting communication with reference to a decision rendered by the Board of General Appraisers on *Rosa rugosa* seedlings.

Messrs. Rölker & Sons state in this connection, "We wish to express our fullest appreciation of the great help given this cause through the previous hard work rendered by Messrs. F. W. Kelsey & Company, of New York City, in obtaining at the time the decision G. A. 4635, on which the present decision on *Rosa rugosa* seedlings is mainly based. We may add here that the \$1.00 per thousand rate of duty will be limited to *Rosa rugosa* seedlings of three years age and under. Older plants will be charged duty applied to rose plants, namely, four cents each." The decision is as follows:

EVERGREEN SEEDLINGS—ROSA RUGOSA

BOARD OF UNITED STATES GENERAL APPRAISERS, NEW YORK

In the Matter of Protests 470249, 42726, 470250 43575 of August Rölker & Sons, against the assessment of duty by the Collector of Customs at the Port of New York.

BEFORE BOARD No. 3

WAITE, General Appraiser: In protest 470249 the goods marked "A" upon the invoice are evergreen seedlings according to the report of the Appraiser, and the testimony in the case, and should have been classified as such under paragraph 668, Tariff Act of 1909, where evergreen seedlings are specifically provided for, rather than assessed for duty under paragraph 264, as nursery stock.

The items marked "B" upon this invoice are found from the report of the Appraiser to be evergreens, but are such as have been produced by methods other than propagation from seed, and they are consequently removed from the category of evergreen seedlings. No testimony was given by the importers with reference to these items. We find, therefore, in accordance with the return of the Appraiser that they are dutiable as assessed under paragraph 264 as nursery stock.

In protest 470250 the goods are described as 2500 *rosa rugosa*, and have been marked "C" on the invoice. They were assessed at four cents each under the provisions in paragraph 264 for "rose plants, budded, grafted or grown on their own roots." They are claimed to be dutiable under that portion of the same paragraph which provides for "brier rose, three years old or less, one dollar per thousand plants." We think the testimony in this case fairly established the fact that these goods are brier roses. This Board held in G. A. 4635, (T. D. 21922) that the species of rose plants known as *rosa rugosa* were properly dutiable as a brier rose, under the law of '97 (paragraph 252). The provision for "brier rose" has been re-enacted into the law of 1909 (paragraph 264). No appeal was ever taken from

the above finding, and under well established rules of interpretation we think it was the intention of Congress that *rosa rugosa* should be dutiable as previously classified under the same language. We, therefore, hold these goods to be dutiable as claimed in the protest, overruling the classification of the Collector.

From the above it will follow that protest 470249 is sustained as to items marked "A," and over-ruled as to items marked "B," protest 470250 is sustained as to items marked "C." Reliquidation will be made accordingly.

BOARD OF U. S. GENERAL APPRAISERS.

Quiz Column

TREATING SCIONS FOR SAN JOSÉ SCALE

The correspondent asks how scions which are to be used for winter grafting and top grafting in early spring should be treated to effectually rid them of any San José scale infestation.

ANSWER

Dipping scions in properly prepared lime-sulphur is probably as efficient a method for ridding them of scale as any remedy you can use. If the scions are completely dormant, as they should be, and the lime-sulphur properly prepared, no injury should result. Lime-sulphur is not the only remedy that you can apply. Scalecide will, in all probability, be equally efficient, and you could also use whale-oil soap at the rate of one pound to three gallons. It might be said in passing that none of these mixtures will add to the pleasure or comfort of handling your scions in the grafting room. If the oil mixtures are used, you can wipe your scions afterwards without any danger of lessening the efficiency of the remedy, rather you will strengthen it, and to the general improvement of handling conditions. If you suspect scale, this is certainly the safe and wise thing to do, and you should not take any chances in using infested grafting wood.

SPRAYING NURSERY STOCK

I would like to see some articles in your paper on practical methods of spraying nursery stock in the row for San José scale, particularly stubs of seedlings after being cut off above the bud, and young fruit tree blocks, giving best apparatus for that purpose. I see nothing advertised for that particular purpose.

Also something on applications of commercial fertilizers to growing nursery stock, best methods, kind of fertilizer, best apparatus, time of applying, kind of crop and practical results. I note a drill for drilling in nitrate or other fertilizers along the row is being advertised.

SUBSCRIBER.

NOTE—Will some good friend offer our inquiring brother suggestions from the wealth of his experience?

EDITOR.

Exhibitions

NATIONAL ORANGE SHOW

Early in March the First National Orange Show was held in San Bernardino, California. This was intended to give some idea of the vast importance of the orange industry in California, and every feature of the industry was illustrated, from the time the fruit was picked till it had started on its way to the markets across the continent. The number of persons who must have had their eyes opened was vast, for the exhibition came just at the time when the state was flooded with winter visitors.

AMERICAN LAND AND IRRIGATION EXPOSITION

For some months a movement has been under way for the promotion of an exposition in New York City which is intended to illustrate the agricultural products of the whole country. Associated with the enterprise are a number of men prominent in transportation and agricultural enterprises in the United States and Canada. The general manager is Gilbert McClurg of New York City. The exhibition is to be held in November, 1911. The prizes are numerous and attractive. These are to stimulate the production of the cereals and the leading agricultural products. For instance, a cup valued at \$1000 is to be given for the best 100 pounds of wheat grown in the United States; a similar prize for the best 100 pounds of red spring or winter wheat grown anywhere in the two Americas; a cup valued at \$1000 for the best 30 ears of corn, for the best cotton, and the best sugar beets.

Five hundred dollars is offered for the best 25 boxes of apples grown anywhere in the world; a cup of \$1000 for the best potatoes grown anywhere in North America. These indicate the scope and expectation of the exposition company. Persons desiring to learn more about it should communicate with Gilbert McClurg, 26th Floor, Singer Building, New York.

A LIVELY MEETING

The Connecticut Nurserymen's Association held their recent annual meeting at the office of the State Entomologist, Dr. Britton, at the Agricultural Experiment Station, New Haven, with President Atwater in the chair. After the reports of the various committees were heard and other business matters of the Association had been attended to Mr. Spring, State Forester of Connecticut, addressed the meeting; his subject was "The raising of conifers for forest planting." Mr. Spring was followed by Dr. G. O. Clinton, Botanist of the Experiment Station, who spoke on "The chestnut bark disease," and Dr. Britton, State Entomolo-

gist on the work of his department in regard to the Gipsy and Brown-tail Moths." The addresses were of great interest to the meeting and the speakers had a very attentive audience. The election of officers resulted as follows: President, Paul H. Hubbard, Bristol, Conn.; vice-president, J. E. Brooks, Westbrook, Conn.; treasurer, W. W. Hunt, Hartford, Conn.; secretary, C. H. Sierman, Hartford, Conn.

In the course of the meeting a number of new members were elected, and the Association is so fortunate as to be able to count nearly every one of the Connecticut Craft among its members.

Note and Comment

AN INTERESTING ESTABLISHMENT

The man who started in the nursery business on a small scale in North Abington but sixteen years ago now owns lands in North Abington, South Weymouth, West Abington, Rockland, and South Framingham to the extent of 550 acres, forming the largest nursery in New England. This man is Mr. W. H. Wyman, proprietor of the Bay State Nurseries. In the North Abington nursery alone, from seventy to one hundred laborers are employed during the busy season. The nursery does mainly a wholesale business. The woodland which still covers a large part of the grounds is being cleared, and after the stumps are burned, this land is planted to rye, which furnishes straw for baling and packing the plants. The company makes its own boxes in one of the packing houses. In recent months, the foreign interests of the nursery have become so extensive that a man has been brought over from Holland to oversee the transplanting of the imported stock, and have general supervision over it. The orderly, attractive grounds of the firm invite many visitors from all parts of the State.



THE WHITE SPRUCE, *Picea alba*
A Long-lived, Healthy, Handsome, Native Tree. One of the Most Desirable of the Conifers.

NEW YORK FLORISTS ASK STATE AID

The movement inaugurated by the New York Florists' Club, the Buffalo Florists' Club, and the Rochester Florists' Club, sometime ago, having for its object the securing of an appropriation with which to erect glass houses at the New York State College of Agriculture for the furtherance of commercial floricultural interests is being actively pushed. Recent advices indicate that the committee gave a large delegation of florists recently a splendid hearing, and the Governor was pleased also to express his personal interest in the movement. Mr. Patrick O'Mara of the New York Florists' Club and Mr. W. F. Kasting of the Buffalo Florists' Club, the wheel horses in the movement, are very optimistic as to its outcome.

Among the Experiment Station Workers

SUMMER APPLES IN THE MIDDLE ATLANTIC STATES, Bul. 194, Bureau of Plant Industry, by H. P. Gould.

This bulletin, the result of investigations carried on by the government "to determine as far as possible the adaptability of fruit varieties to different conditions and the particular climatic and other requirements of different varieties," is similar in character to Bulletin No. 135 of the Bureau, dealing with the southeastern states. In recent years, the early apple industry has developed to rather large proportions in the Coastal Plain region of the Middle Atlantic States. Since so many of the peach orchards have been destroyed by yellows, apple culture has to some extent taken the place of fruit growing in this region, the largest importance being reached in Kent County, Delaware. The methods of handling the fruit are very similar to those practiced with peaches; for the fruit is not usually marketed until fully ripe, or ready for immediate use. Besides great care in picking, this necessitates several pickings of each variety in order to get all the fruit at the best time. One-half bushel and seven-eighths bushel baskets are used largely in marketing these early apples.

A descriptive list of about sixty of the most important varieties of the region and some others less known, includes Alexander, Early Harvest, Gravenstein, Maiden Blush, Oldenburg, Red Astrachan, Wealthy, and Yellow Transparent. The bulletin closes with phenological data relating to apples in New Jersey, Maryland, Delaware, Virginia, and North Carolina, which will prove most valuable, on account of the possibility of comparisons with other sections and the important deductions that may be made therefrom.

ARSENIC IN APPLES

Important facts in connection with experiments in the spraying of apples covering a period of three years are noted in the February issue of *Better Fruit* by Prof. P. J. O'Gara, of Medford, Oregon. He has been searching for the cause of the spotting of apples, sometimes with red spots, sometimes with black, which generally do not develop until after the fruit has been packed and left in storage a short time. Professor O'Gara began his experiments about the same time that Prof. M. B. Waite of the Department of Agriculture stated that this spotting might be caused by soluble arsenic, or impurities in the lead arsenate. Knowing that a small quantity of an arsenical in solution will heighten the reddish color in fruits, tests were made of spotted apples; and it was found that badly spotted portions of the skin contained approximately twice as much arsenic as portions that were apparently sound. Mr. O'Gara recommends the use of at least one pound of unslaked lime with each pound of lead arsenate to neutralize any arsenate which would otherwise have a burning effect.

WHAT WE ARE DOING IN IOWA

"As horticulturists we try to impress on the minds of everyone the importance of breeding new varieties of fruits right here at home. In the southern part of our state (Iowa), this does not apply to apples, as they grow all the most desirable varieties, and when these are well grown perfection is very nearly arrived at.

Plant fewer trees and take better care of them! It is foolishness to advocate that good fruit can be grown without a good deal of intelligent, patient care. Insects and worms must be fought and subdued and that before they have done their work of destruction. What do you think when you see a man spraying a row of currant bushes after they have been defoliated by the currant worm? You would say, "There is a man locking his stable after the horses have been stolen." Currant bushes, if properly taken care of, will never show damage by the currant worm. Watch the bushes and spray as soon as the eggs begin to hatch. You know what to spray with if you read your horticultural reports, and if you do not read them I advise you to get a move on and join this society and look the matter up, and then you will know what to do.

PENNSYLVANIA NURSERY CO.

Girard, Erie Co., Pa.

GROWERS OF A COMPLETE GENERAL LINE.

SPECIALTIES: Peach, Cherry, Plum, Currants, Grapes, Hedging, Ornamentals, Shrubs—some extra large. Plum Farmer Raspberry. Send us your want and surplus lists.

5,000 Deutzia, Pride of Rochester,
3 to 4 feet, extra bushy.

Good stock of other shrubs.

W. B. COLE, Painesville, O.

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Gardeners' Chronicle

IS THE LEADING HORTICULTURAL
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H. G. COVE, 41 Wellington Street,
Covent Garden, - LONDON, W. C.

W. T. HOOD & COMPANY

"Old Dominion Nurseries"
RICHMOND, VA.

Offer for Fall 1910 and Spring 1911

PEACH TREES—fine assortment.

PEAR TREES—2 yr. unexcelled.

CHERRY—2 yr., none better.

CALIFORNIA PRIVET, 1 yr., fine plants.

NATURAL PEACH PITS—crops 1909 and 1910.

100,000 PEACH SEEDLINGS from buds for lining out.

General line of Nursery Stock

Send us your want list

The New England Nurseries, Inc.

BEDFORD, MASS.

HIGH GRADE FRUIT AND ORNAMENTAL
TREES, SHRUBS, ROSES AND
HERBACEOUS PERENNIALS

We grow everything required for Orchard, Garden,
Lawn and Landscape Planting.

Catalog and Trade-list on application.



Partial View of Persimmon Trees in Nursery,
shown in our Retail Catalogue, page 23.

GLEN SAINT MARY NURSERIES CO.
Dept. 3, Glen Saint Mary, Florida

PERSIMMONS PRIVET ARBORVITAE

Florida-Grown
True to Name

Your trade will be quick to see the value of Glen Saint Mary stock—our methods of propagating assure quality and satisfactory results, and much of our product will succeed practically all over the North. Let us know your wants—we'll gladly supply prices and particulars on request.

I am specially interested in the line of work of growing new varieties of plums and have been at it for some time. If any of you gentlemen will come down and see us when plums are ripe we will allow you to sample some that will do your soul good. Seeing and eating is better than any description that I can give. This is a great work and very much can be expected from it.

The time is not very far distant when plenty of good pears will be grown in northern Iowa. Good ones are grown now but in no great quantity. Part of Iowa, as you all know, is a great fruit growing region. Different varieties seem to be gradually extending to the north, new ones are coming in, and in a few years there will probably be as great a change for the better as has been developed in the past."

Osage, Ia.

C. F. GARDNER.

THE CASHEW-NUT

The Cashew-nut is the produce of a small tree about 16 feet high, named *Anacardium occidentale*, a native of the East Indies, the West Indies, and South America, but it is supposed that they are distinct varieties. The fruit of this tree is formed by the enlargement of the footstalk of the flower, and is about the size of a small orange, with an agreeable sub-acid flavour and a slight astringency. At the end, and on the outside of this fruit, grows a kidney-shaped nut, an inch or more in length and three-quarters of an inch broad, consisting of two shells. The outer skin is of an ash color and very smooth; under this is another which covers the kernel, and between them there is a thick, black juice, which is very caustic, but the kernel, when fresh, has a most delicious taste, and abounds with a sweet, milky juice. They are eaten like Chestnuts, either raw or roasted. These are known as Cashew-nuts. The juice which they contain is extremely acid and corrosive, producing when applied to the skin severe inflammation, followed by blisters, and it has often proved very troublesome to those who incautiously put the nuts into their mouths to break the shell. The broken kernels are sometimes imported for mixing with old Madeira wine, the flavor of which they improve.—*Journal of Horticulture*.

Obituary

JOHN W. ADAMS

Mr. Adams, who was founder of the Adams Nurseries of Springfield, died at the age of eighty-two the second week in March. He was born in New Hampshire, and has been associated almost all his life with plant enterprises. His business was of the personal type, growing plants for special purposes. One of its features was the establishing of hedges and the executing of landscape plans. Mr. Adams was an active participant in all enterprises making for the growth and improvement of his native city. He served two years as a member of the legislature, and held other offices of trust and responsibility, both in Maine, where he resided for sometime, and in his home town of Springfield. He is survived by his widow and four children.

FOR SALE

Nursery business established nearly thirty years, splendid trade throughout the Northwest. Will be sold with or without real estate, with or without interest in 150,000 up-to-date mailing list. Terms cash. Reason for selling have too much other business.

OSCAR H. WILL & CO., Bismarck, N. D.

WANTED

An experienced nurseryman. Good wages to the right party, or an interest in the business.

F. C. SMITH, Ashland, Wis.

WANTED

at once experienced nurseryman, to act as working foreman in a new nursery building up a wholesale business. Steady work. Willing to pay the price for the right man. Give particulars, salary expected, full description and references in first letter.

Address Foreman, care of National Nurseryman.

WANTED AT ONCE

An experienced and reliable foreman for nursery. State particulars, salary wanted, references, etc.

SOUTHWORTH BROS.
BEVERLY, MASS.

WANTED

Competent "all around" office man. State experience, salary wanted, and full information first letter.

MONTANA NURSERY CO.
BILLINGS, MONT.

WANTED

an outside man who knows stock, planting and can design small plans and carry them out. Should be something of a salesman. We have a good place for a competent man.

NORTH JERSEY NURSERIES

NEWARK AND MILLBURN, N. J.

WANTED

To purchase an interest in a good reliable retail nursery in the South or Southwest and take charge of the sales department. Have had several years' experience and can give references. Would be glad to hear from any nurseryman in the territory mentioned who would be glad to dispose of a part of his holdings to the right man.

Address "Sales," care of National Nurseryman.

WANTED

Competent Gardener for small country place on Lake Erie. Must be familiar with vegetable and flower-garden work and fruit-tree culture. Address, with references,

F. H. PAYNE, Box 710, Erie, Pa.

The Finest EVERGREEN GROUND COVERS

Andromeda Floribunda, Leucothoe Catesbaei, Galax Aphylla, Mitchella Repens and others. Best Plants for Rhododendron Beds. Catalogs.

HIGHLANDS NURSERY

(3800 feet elevation in Carolina Mts.) and Salem Nurseries.

HARLAN P. KELSEY, Owner

Hardy American Plants, SALEM, MASS.

Our Book Table

THE CONSERVATION OF NATURAL RESOURCES IN THE UNITED STATES. by Charles R. Van Hise. 5½ x 8. 400 pages. Illustrated. Published by The MacMillan Company, New York, 1910. Price \$2.00.

This is a general handbook for convenient reference, and not a volume specializing in any one field. It deals with the several subjects which the title indicates, as minerals, water, forests, and soils and in so doing, cannot amplify any one of them. The book has grown up out of a real need; for it is the first book which brings together all these subjects and treats them in their relation one to another. Previous reports and magazine articles, practically the only publications on the subject, have dealt only with special phases of it.

A volume treating of so important a question, which, strangely enough, has been very slow in receiving due consideration, must be of great interest and importance the country over; and undoubtedly it will be appreciated, coming, as it does, to supply such a need, and from an author eminent in the field of Geology, now president of the State University of Wisconsin.

INSECTS AND DISEASE, R. W. Doane. 5 x 8. 227 pages, including bibliography and index. Illustrated. Published by Henry Holt & Co., New York. Price \$1.62 postpaid.

Perhaps the chief value of this volume lies in the fact that it is non-technical; for hundreds of books or articles have been written on the same subject which are freely consulted by entomologists and physicians, but which do not come to the notice of the general reader. This book is very moderate in price, compared to the value it may have for people who have not stopped to realize how many kinds of insects there are round about which are dangerous as carriers of disease or otherwise. One chapter is entitled "How Insects Cause or Carry Disease." Several chapters are devoted to a consideration of mosquitoes and of the house-fly, which some think ought to be called the typhoid-fly, to remind people that it is not so innocent as was formerly thought. The book contains practically the latest information on the questions treated, having been published in August, 1910, and it would be well worth one's time to spend a few hours in a perusal of it.

THE SMALL COUNTRY PLACE, Samuel T. Maynard. 317 pages. 5½ x 8½ in. Illustrated. Published by J. B. Lippincott Co., Philadelphia and London, 1908. Price, \$1.50.

You can feel assured, by glancing at the cover and the natural-looking apple blossoms just inside, that this is going to be an attractive book. Turning to the title page, you learn that there are one hundred illustrations within, and this adds to your interest in the work; for you like to see, and not merely imagine, some of the scenes described. The author takes you from the time of choosing the location for a country home through the different methods of beautifying this place, and many of the phases of farm activity, and closes the book with an extensive monthly calendar.

The chapter of twenty-five pages on fruit growing is devoted to the apple, as being the most important fruit tree of the temperate zone. After giving instructions regarding equipment, this chapter deals with soil, selection and arrangement of trees, cultivation, grafting, pruning, and other matters, and includes a detailed estimate of the cost of an apple orchard per acre, which may be summarized as follows: year previous to planting, for plowing and seeding, \$11.50; year of planting, trees, seeding, etc., \$24.90; next year, cultivation, cover crop, pruning, and spraying, \$12.00; succeeding years, the same, \$15.00. With garden crops in the orchard, the estimated cost is: first year, fitting land, \$11.50; second year, cost of trees, plowing, and planting, \$15.90; succeeding years, spraying and pruning, \$5.00.

W. G. der Nederlanden, representing M. J. Guldemon, "Gusta Nurs." Lisse Holland, called on Nurserymen in Rochester, about the middle of March.

PEACH SEED

We now have in stock VIRGINIA NATURAL PEACH SEED crop 1910, can fill any size order.

VIRGINIA NATURAL PEACH SEED CO.,
4th Ave. & Clinton St., BALTIMORE, MD

25,000 Cumberland Raspberry

Fair stock of all kinds of small fruits.

W. B. COLE, Painesville, O.

OUR NEW SCION LIST JUST OUT.

APPLE SCIONS OUR SPECIALTY.

We have our usual supply of Nursery Stock. Apple, Cherry and Peach in good supply. Write us.

JOHN A. CANNEDY NURSERY AND ORCHARD CO.
CARROLLTON, ILL.

Quick Budding and Stiff Stems

Get into the market with better blooms—Sheep's Head Brand of Pulverized Sheep Manure will prove a money maker for you. Unsurpassed as an extra stimulant to plants, pots or beds. Will not cause black spot like stable manure. Free from weedseeds—always ready. Carnations, roses, chrysanthemums and violets are particularly benefited. Send for booklet, "Fertile Facts." It shows you the dollars and cents view and points out the actual profits from using Sheep's Head Brand, and shows you how to prepare soils so that they will retain soluble plant foods near the surface of the ground within reach of the rootlets of growing vegetation. We will send you a copy of this interesting and instructive book free.

Write to-day.



NATURAL GUANO CO.
Dept. 23 Aurora, Ill.

CATALPA SPECIOSA

Several thousand extra fine trees, 2-inch caliper.

W. B. COLE, Painesville, O.

TREE LABELS

Plain or Printed.

Iron or Copper Wire.

ALLEN-BAILEY COMPANY

DANVILLE, N. Y.

Write for Prices.

SURPLUS STOCK

500,000 California Privet, from 2 to 4 feet tall, one and two years old. Two-year old plants were cut to the ground last spring and are good, clean stock. Send for wholesale list. We also offer at low prices, Japan and German Iris, Hardy Phlox and Robusta Cannas.

WOOD HARMON & CO.
NURSERY DEPARTMENT

Kingshighway and E. 15th St. BROOKLYN, N. Y.

Catalogues Received

L. J. Farmer, Pulaski, N. Y. 1911 catalogue. Strawberries a specialty.

Luther Burbank, Santa Rosa, Cal. Illustrated catalogue, January, 1911.

Huntsville Wholesale Nurseries, Huntsville, Ala. Bulletin No. 1, March 4, 1911.

Geo. R. Schaubert, Ballston Lake, N. Y. Mailing card, giving prices of strawberry plants.

Andorra Nurseries, Chestnut Hill, Philadelphia, Pa. Price list of specimen trees, shrubs, roses, and fruit, spring, 1911.

B. G. Pratt Company, 50 Church St., New York City. "Fungous Diseases Controlled by Sulfocide."

Webster Basket Company, Webster, N. Y. Price list of fruit baskets, berry crates, etc.

Woodlawn Nurseries, Rochester, N. Y. Catalogue of fruit trees, vines, shrubs, etc.

Huntsville Wholesale Nurseries, Huntsville, Ala. Bulletin No. 2, March 8, 1911.

Leedle Floral Company, Springfield, Ohio. Catalogue of roses.

Thomsen Chemical Co., Baltimore, Md. Descriptive pamphlet of Orchard Brand Lime Sulphur Solution.

The Gardner Nursery Co., Osage, Iowa. Catalogue of hardy blizzard belt trees, plants, and vines.

Harlan P. Kelsey, Salem, Mass. Wholesale price-list Kelsey's rhododendrons, azaleas, and other strictly hardy American plants, fall, 1910, spring, 1911.

Biltmore Nursery, Biltmore, N. C. Twelfth annual wholesale trade list, of ornamentals, 1911.

Bausch & Lomb Optical Co., Rochester, N. Y. "Hydrometers for the Lime-Sulphur Washes."

The Whiting Nursery Co., Yankton, S. D. Annual catalogue of fruit and ornamental trees and small fruit plants, spring, 1911.

American Forestry Co., Nurseries Dept., South Framingham, Mass. Price list of evergreen and deciduous trees, and seeds.

The E. C. Brown Co., Rochester, N. Y. Catalogue of modern high pressure spray pumps. Catalogue No. 16.

Geo. S. Josselyn, Fredonia, N. Y. Condensed price list for spring of 1911.

Louis Leroy's Nurseries, Angers, France. Wholesale trade list, autumn, 1910, and spring, 1911.

Glen Brothers, Glenwood Nursery, Rochester, N. Y. Catalogue of ornamentals, evergreens, deciduous shrubs, etc. Chestnuts a specialty.

J. T. Lovett, Little Silver, N. J. Catalogue of small fruits, spring, 1911.

William Tricker, Arlington, N. J. Catalogue of water lilies, hardy, old-fashioned garden flowers, roses, azaleas, etc.

Arthur J. Collins, Moorestown, N. J. "Collins' Guide for Orchard and Garden."

Augustine & Co., Normal, Ill. Planters Wholesale Price List, No. 44.

Mount Arbor Nurseries, Shenandoah, Iowa. Bulletin No. 1.

Forest Nursery & Seed Co., McMinnville, Tenn. Special list.

C. H. Weber Nurseries, Greenfield, Ind. Special wholesale list.

Chase Nursery Co., Huntsville, Ala. Bulletin No. 3, spring, 1911.

S. H. Warren, Auburndale, Mass. Fifty-seventh annual catalogue of strawberry plants.

Charlton Nursery Co., Rochester, N. Y. Wholesale price list for 1911.

Wm. H. Moon Company, Morrisville, Pa. Wholesale catalogue of choice ornamental nursery stock.

F. W. Kelsey Nursery Company, 150 Broadway, New York. An abridged catalogue of leading varieties and specialties.

Ohio Nursery and Supply Company, Elyria, Ohio. Wholesale price list.

American Forestry Co., South Framingham, Mass. Little Tree Farms.

Youngers & Co., Geneva, Nebr. Bulletin No. 2.

P. OUWERKERK,

No. 216 Jane St., Weehawken Heights, Hoboken, N. J.

Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our HOLLAND NURSERIES. Some of the goods on hand here during the packing season.

BOX STRAPS

WARD-DICKEY STEEL COMPANY

Manufacturers of Planished Sheet Steel

INDIANA HARBOR, IND.

GRAPE VINES

We offer for Fall and Spring delivery the largest and most complete stock of GRAPE VINES in strong grades for nurserymen and dealer's trade.

We also have an extra fine block of President Wilder currants which have made a strong growth.

SEND LIST OF YOUR WANTS FOR PRICES

T. S. HUBBARD COMPANY

Established 1866

FREDONIA, N. Y.

A well-known nursery house writes of our Credit List, "Had we had these reports years ago we would have saved several thousand dollars." Why don't you avoid further losses by joining the National Florists' Board of Trade, 56 Pine St., New York?

3,000 Standard Bartlett Pear

No. 1, 2-year

A good assortment of other kinds

W. B. COLE, Painesville, O.

The Southwestern Nursery Co.

of OKEMAH, OKLAHOMA

will have for late Fall and early Spring an exceptionally fine lot of ONE YEAR APPLE, PEACH, PLUM and BUDDED ROSES; TWO YEAR CALIFORNIA PRIVET, CAROLINA POPLARS, and CATALPA SPECIOSA.

WE INVITE YOUR INSPECTION.

EASTERLY NURSERY CO.

CLEVELAND, TENN.

OFFER FOR FALL 1911

One and two year Apple; One year and June Bud Peach; California Privet, in car-load lots. Also Magnolia, Grandiflora, Arbor-Vitea, Norway Spruce, Md. Plantier, and Baltimore Bell Roses. Ask for prices.

A BARGAIN IN STANDARD PEARS

Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere Address,

PIONEER NURSERIES COMPANY,

Salt Lake City, Utah.

Chase Brothers Company, Rochester, N. Y. Bulletin No. 5, Wholesale price list for spring, 1911.

Willowdale Nurseries, Rakestraw & Pyle Co., Kennett Square, Pa. Wholesale trade list.

Geo. Jackman & Son, Woking Nursery, Woking, Eng. Catalogue of plants.

Wm. Crowder & Sons, Horncastle, England. Catalogue of hardy grown trees and shrubs.

J. M. Thorburn & Co., 33 Barclay St., New York City. Large catalogue of high class seeds.

Michigan Bul. 262 is an elementary treatise on how to plant orchards, with a discussion of the best varieties of the leading orchard fruits. For beginners it is a valuable publication.

NATIONAL NURSERYMAN:

I hand you herewith \$1.00 for the National Nurseryman. I have taken the magazine many years and do not want to be without it.

B. F. MASON,
Indiana.

AMERICAN FORESTRY ASSOCIATION

At the thirtieth annual meeting of the American Forestry Association, President Guild predicted the enactment of the Appalachian forest reserve bill during the present session of Congress. He urged the foresters not to allow a single amendment to be made to the bill. A movement is on foot to establish a national forest reserve adjacent to our capital city. This prediction has been verified. Both houses have passed the bill and nothing remains to be done but the affixing of the Presidents' signatures about which there is no question.

BORROWED ITEMS

A lad of 18 years has been recommitted to the California state reformatory on a charge of defrauding the Oregon Nursery Co., collecting commissions on fictitious orders.

Griffing Bros. Co., nurserymen at Jacksonville and Macclenny, Fla., are about to start a new nursery in Texas. John Feister, formerly a foreman at the main nursery, will have charge of the new establishment.

C. H. Webster, formerly in the nursery business at Centralia, Ill., is now establishing a nursery at The Dalles, Ore. He has purchased a small tract of ground there, and will at once erect on it a suitable residence for himself and family.

New Haven, Conn.—Ernest F. Coe, president of the Elm City Nurseries, sails from San Francisco, December 13, for Japan. The winter will be spent in travel and study of Japanese gardens.

After being at Reading, Mass., for sixty years, J. W. Manning the present proprietor of the well-known Reading Nurseries, has been compelled to move his entire equipment to North Wilmington, Mass., to a much larger place. The rapid growth of the business made this necessary. Floramead Nursery contains a wealth of trees, shrubs, fruits and flowers and will soon become as famous as the older nursery was for so long a term of years.—*Florists' Review*.

Bristol, Ind.—Saddler Bros., of Bloomington, Ill., have bought a 440-acre tract of fine land in Starke Co., Ind., and will devote the same to the upbuilding of a large nursery business.

Gays Mills, Wis.—The Gays Mills Fruit Farm & Nursery Co., has acquired 100 acres of land at Gays Mills and will plant the entire acreage to Apples.

Collegeport, Tex.—E. S. Stockwell & Son of the Gulf Coast Nursery at Alvin have purchased land at Collegeport and will at once begin the development of a branch nursery at this point. They will also plant 100 acres to Oranges as an orchard.

American Forestry Co.

SOUTH FRAMINGHAM, MASSACHUSETTS

Consulting and Contracting Departments

**WHOLESALE GROWERS OF LITTLE TREES
FOR FOREST, SHADE AND
ORNAMENTAL PURPOSES**

BOSTON OFFICE, 903 TREMONT BUILDING
(By appointment only)

THEODORE F. BORST
Forest Engineer

**We have TWENTY MILLION little trees
growing here Come and see them**

Unsurpassed Quality

Wholesale Prices

LITTLE TREE Price List with Suggestions for Forest
Planting Sent upon request.

AMERICAN FORESTRY COMPANY

LITTLE TREE FARMS

South Framingham, Massachusetts

CARBONATE OF LIME

GROUND LIMESTONE

FOR SOIL IMPROVEMENT

"THE ONLY THING" in lime for light texture, sandy or gravelly soils. Our limestone is of the high calcium variety (therefor low in magnesia) and is ground to pass 99% through a 50-mesh screen and 75% through a 100-mesh screen.

Can be applied at **ANY** time with **ABSOLUTE SAFETY**. No danger from burning. No bursting of bags. Put up in 100-lb. paper or burlap sacks.

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Prof. S. A. Beach of Ames, Iowa, in a recent number of the *Rural New Yorker*, notes a new sport of the Gravenstein apple which has appeared at Olga, Washington. This fruit comes from a limb which appeared about three feet from the ground on a tree among fifty Gravensteins, and is nearly, or in some cases entirely red, instead of striped. Some of this fruit was exhibited at the Spokane National Apple Show in November, and it is said to be a better keeper and a better bearer than the ordinary Gravenstein. So far as form and flavor are concerned, it is like the Gravenstein.

Chairman Pitkin of the Legislative Committee announces that the Simmons bill, which provides for the inspection of nursery stock at the ports of entry, came up for consideration in the House of Representatives towards the closing days of the session, and was defeated. This disposes of the

bill for another year, as, of course, it will not be considered by the recalled federal legislature.

Mr. Henry Kallen of the well known nurserymen Kallen & Lünemann, Boskoop, Holland, has again arrived in this country to solicit business from the many firms they have been dealing with.

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15,000 North Star
5,000 Victoria
5,000 White Dutch
3,000 Perfection
5,000 Red Dutch
7,000 Fay's Prolific
3,000 Pomona
8,000 London Market
12,000 Wilder

RASPBERRY PLANTS

50,000 Cumberland
10,000 Eureka
30,000 Gregg
100,000 Kansas
10,000 Munger
15,000 Plum Farmer
10,000 Older
20,000 Black Diamond
30,000 Columbian
5,000 Shaffer
15,000 Haymaker
3,000 Eaton
20,000 King
15,000 Miller
30,000 Cuthbert
5,000 Marlboro
10,000 Loudon

CUTTINGS

California Privet
Amoor River Privet
Carolina Poplar
Volga Poplar
Lombardy Poplar
Golden Willow
Althea
Spirea Van Houttei
300,000 Grape
100,000 Currant
50,000 Gooseberry

LAYERS AND TRANSPLANTING STOCK

5,000 Josselyn layers
10,000 Houghton small plants
20,000 " layers
15,000 Downing small plants
25,000 " layers
5,000 Pearl small plants
5,000 " layers
20,000 Currants small plants
10,000 Calif. Privet small plants

BLACKBERRY PLANTS

20,000 Early Harvest
15,000 Erie
25,000 Eldorado
15,000 Rathbun
10,000 Mersereau
3,000 Ancient Britton
5,000 Ohmer
3,000 Loganberry
20,000 Ward
30,000 Snyder
30,000 Taylor
10,000 Wilson
5,000 Wachusett
3,000 Iceberg

100,000 Grape Vines, assorted
200,000 Asparagus, assorted
25,000 Horse Radish
25,000 Rhubarb
1,000 Holt's Sage
100,000 California Privet
5,000 Russian Mulberry
2,000 Rocky Mountain Cherry
10,000 Cinnamon Vine Tubers

100,000 Transplanted Raspberry Plants, extra heavy, for Retail Trade.
500,000 Strawberry Plants, extra fine. Price list free.

W. N. SCARFF, New Carlisle, Ohio

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is the name of the men who
grow the finest

CHERRY

that can be produced by suitable soil,
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Take a look at the stock or ask for a
sample and be convinced of the *extra*
quality of their

TREES

CHERRY, 2-yr., 1 1/8-inch up, 7 to 8 feet, for high-
class retail trade.

CATALPA SPECIOSA, 2 to 3 feet.

H. M. Simpson & Sons,

Vincennes, Indiana

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NURSERIES
420 ACRES

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300 varieties of Conifers, 1 to 4 years old.
1200 varieties of Ornamental Trees and Shrubs, 1 to 3 years old.
1600 varieties of New and Old Ornamental Trees & Shrubs in all Sizes.
250 varieties of Climbing Plants.
400 varieties of Conifers, 1 to 4 feet high.
400 varieties of Perennials.
800 varieties of New and Old Roses.

We Have No Agents.
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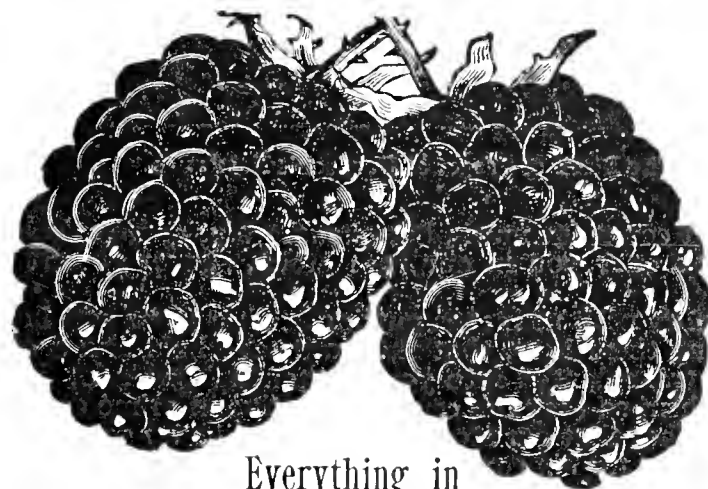
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10 gal. keg making 2,000 to 5,000 gals. spray, delivered at any R. R. station in the United States for \$12.50. Prompt shipments. Every grower of fruits and vegetables should have our Report of wonderful results 1910.
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Everything in
Small Fruit Plants.

Ask for price list.

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For Nurserymen and Florists

The kind that give satisfaction.

Facilities for the handling of your requisite, combined with the quality of our product is unsurpassed.

Samples and prices are at the command of a communication from you.

Dayton Fruit Tree Label Co.

South Canal St., Dayton, Ohio

F. J. GROOTENDORST & SONS,

BOSKOOP

HOLLAND

Complete line of high-grade Ornamental Trees, Shrubs Evergreens and Bulbs. SPECIALTIES: Acer, Aesculus, Ampelopsis, Aristolochia, Azalea, Buxus, Clematis, Dielytra, Funkia, Hydrangea, Kalmia, Magnolia, Paeonia, Phlox, Rhododendron, Roses, Standard Roses, Conifers, Tulips, Hyacinths, Narcissus, Crocus, Palms, Bay Trees.

Catalogue on application to our Mr. C. Grootendorst, care of Messrs. P. C. Knyper & Co., 10-12 Broadway, New York.

YOUNGERS & CO. GENEVA, NEB.

FOR LOW PRICES ON

CHERRY APPLE PEACH
PEAR EUROPEAN PLUM

GOOD SUPPLY OF

Grape Vines Gooseberry Currants
Shade and Ornamental Trees
SEEDLINGS

We have a large stock of **MAPLE, ELM, OSAGE** and **HONEY LOCUST.** Write for prices.



Small Fruit Plants for the Nursery Trade, Spring 1911

Black and Purple Raspberry Tips, Red Raspberry, Blackberry, Dewberry, Strawberry, Gooseberry Layer Plants, 1 and 2 years Layered, Orange Quince, Gooseberry and Currant Cuttings, Asparagus, 1 and 2 year old, Horseradish, Rhubarb 1 and 2 year old Roots, also divided Roots. Write for prices.

P. D. BERRY, Dayton, Ohio

Growers Who Order Trees By The Thousand for Big Orchards, Get Them at Harrison's Nurseries

The Same High Quality that Brings Us Big Orders is Your Assurance of Quality in Buying for Your Trade--Whether Your Order be Large or Small.

Harrison's Nurseries do things on a big scale—millions of trees of *some* kinds; thousands and hundreds of thousands of practically *all* kinds. Quantity alone



Harrison's Vines Bear "Some Grapes"

Part of One Block of Grapes at Harrison's Nurseries

doesn't count for much, but *quantity plus quality does*—and that's the combination we offer you in our 1911 stock, shown in part by the following surplus list.

Quality with us means putting such a vigor and health into our trees, while growing them here, that they will take hold and succeed right from the start when transplanted into your customers' grounds; it means digging and shipping them so they are certain to arrive in prime condition.

The fact that our stock is selected alike by growers who buy ten thousand or more trees for big commercial orchards, and by city men who will need only one or two for their back yards, *proves* that our stock is "quality stuff" and that our service and prices are right.

Here's part of our surplus list, but we have scores of other special lots of trees that we'd like to tell you about, and that you'll be glad to know about. You need some of this stock—you need it now; write us your needs and we'll send full particulars with prices.

SURPLUS LIST OF STOCK FOR THE SPRING 1911 TRADE

APPLE—TWO YEAR

	6-7 ft. 1-in. 25c.	-6 ft. 1 1/8-in. 20c.	4-5 ft. 1 1/4-in. 16c.	3-4 ft. 1 1/2-in. 10c.	3-4 ft. 1 3/4-in. 8c.
Aikin	100	200	200		
Arkansas Black		100	100		
Apple of Commerce		200	200		
Ben Davis	500	1000	6000	8000	1000
Carthouse	50	150	100		
Cooper's E. Market		150	150	100	
Dominie	150	400	100		
Early Strawberry				200	
Early Melon		100	100		
Early Harvest		1000	1400	1200	150
Flora Belle	50	400	400	200	
Fannie		200	200		
Gano	500	2000	2000	2000	2000
Golden Beauty	1000	1000	1000		
Ingram	50	100	100		
Jefferies		100	100		
Kennard's Choice		100	300	100	
Late Raspberry		150	100		
Lawver	50	100	50		
Longfield		100	100	700	
Lankford	100	500	300	100	
Martha Crab		100	100		
Mann		100	100	100	
M. B. Twig	1000				
Missouri Pippin		200	400	100	
Myrick		200			
Opalescent	100	400	300		
Coffelt Beauty		150	150	50	
Payne's L. Keeper		100	100		
Porter		100	200	50	
Rolfe	100				
Roman Stem	50	500	200	100	
Red Astrachan				1000	250
Salome			200	200	
Sweet Bough				150	50
Springdale		200	200		
Stark	1130	1100	5000	170	110
Smith's Cider	100				
Spitzenburg		270	840	850	
Virginia Beauty		100	100		
Winesap	1000	5000	5000	5000	1000
Walbridge		50	50		
Whitney Crab		150	150	50	

APPLE—TWO YEAR—continued

	6-7 ft. 1-in. 25c.	5-6 ft. 1 1/8-in. 20c.	4-5 ft. 1 1/4-in. 16c.	3-4 ft. 1 1/2-in. 10c.	3-4 ft. 1 3/4-in. 8c.
Yellow Trans-					
parent	500	1000	1000	4000	3000
Yellow Belle-					
flower			300	200	

APPLE GRAFTS—ONE YEAR

	3-4 ft. 10c.	2-3 ft. 8c.
Ben Davis	1000	1000
Baldwin	50000	50000
Duchess	100	100
Ensee	500	500
Grimes	500	500
Gano	500	500
Gravenstein		500
McIntosh	1000	1000
N. W. Greening	5000	5000
Northern Spy	500	500
R. I. Greening	2000	2000
Red Astrachan	1000	1000
Rome Beauty	4000	7000
Smokehouse	50	50
Spitzenburg	500	500
Stark	1000	1000
Transcendent	4000	1000
Winter Banana	100	100
Winesap	15000	5000
York Imperial	50000	50000
Yellow Transparent	2000	2000

APPLE—ONE YEAR—BUDDED

	5-6 ft. 1 1/8-in. 16c.	4-5 ft. 1 1/4-in. 14c.	3-4 ft. 1 1/2-in. 10c.
A. G. Russett	200	200	
Arkansas Black	100	100	
Belleflower	500	500	
Ben Davis	8000	8000	8000
Baldwin	4000	4000	4000
Chenango Strawberry	300	300	300
Coffelt	250	250	
Cooper's Early Market	400	400	
Carthouse	300	300	
Duchess			3000
Dominie	200	200	200
Early Harvest	3000	3000	3000

APPLE—ONE YEAR—BUDDED—con.

	5-6 ft. 1 1/8-in. 16c.	4-5 ft. 1 1/4-in. 14c.	3-4 ft. 1 1/2-in. 10c.
Early Strawberry	200	200	200
Early Colton	200	200	100
Fourth of July	300	300	300
Fannie	100	100	100
Fallawater	100	100	100
Fall Pippin	300	200	200
Golden Beauty	100	100	100
Golden Sweet	300	300	300
Grimes' Golden	1000	1000	2000
Gano	2000	2000	1000
Hyslop	300	300	300
Ingram	250	250	
Jefferies	250	250	
King	400	400	200
Kennard's	250	250	
Lawver	200	200	
Limbertwig	100	100	
Lankford Seedling	500	100	100
Missouri Pippin	500	500	
Mann	250	250	
McIntosh	2000	3000	2000
Myrick	200	200	200
Northern Spy	1000		
P. W. Sweet	1000	1000	
Payne's Late Keeper	250	250	
Porter	200	200	
Pewaukee	250	250	
R. I. Greening	400	300	600
Romanite	200	200	
Rolfe	500	100	100
Red Astrachan	6000	6000	6000
Red June	200	200	200
Rambo	200	200	200
Rawles' Janet	200	200	100
Sweet Bough	350	350	
Smith Cider	200	400	
Springdale	250	250	
Scott's	250	250	
Transcendent	300	300	300
Salome	200	200	200
Stark	4000	3000	1000
Tallman's Sweet	350	350	
Wolf River		1000	500
Winter Banana	500	500	
Walbridge	200	200	
Winesap	4000	4000	1000
Yellow Transparent	5000	5000	7000

Harrison's Nurseries
J. G. HARRISON & SONS PROPRIETORS
BERLIN MARYLAND

Designed and written by The McFarland Publicity Service, Harrisburg, Pa.

W. F. HUMPHREY, PRINTER, GENEVA, N. Y.



THE NATIONAL NURSERYMAN



MAY, 1911

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

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Established 1847.

OFFER A GENERAL LINE OF

Choice Nursery Stock

PEACH, STD. PEAR,
PLUM, CHERRY, Etc.

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MONROE, MICH.

Mount Arbor Nurseries

E. S. WELCH, Proprietor

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Make a Specialty of a Full Line of
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WE HAVE A SURPLUS OF

APPLE—some varieties.

CHERRY—sour and sweet varieties.

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AMERICAN ELM SEEDLINGS

HYBRID PERPETUAL ROSES

CALIFORNIA PRIVET

Will be pleased to name prices on your wants.

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OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI
by the thousand.

Andorra Nurseries,

WM. WARNER HARPER, Prop.

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50,000 11/16 and up, 5 to 6 feet

45,000 9/16-11/16, 4 to 5 feet

20,000 3 to 4 feet branched

Alaska, Beeches' Sweet, Darth Early Strawberry, Excelsior,
Faribault, Florence, Hiller, Hyslop, Lyman's Pro. Minnesota,
Orange Pickers, Quaker B, Siberian, Sweet Russett, Sweet
Orange, Transcendent, Virginia, Whitney.

THE LARGEST STOCK OF CRABS IN
THE COUNTRY THIS SEASON

LET US PRICE YOUR LIST, WE ARE PUTTING THEM
DOWN CLOSE TO COST.

All extra smooth Stock—samples on request.

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VINCENT LEBRETON'S NURSERIES
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Millions of French Fruit and Ornamental
Stocks supplied to the largest nurserymen
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LARGE NURSERIES OF:
Rhododendrons, Hardy Azaleas, Roses, Box-
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etc., etc.

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HOLLAND**

LARGEST EXPORTERS OF
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Tilias, Planes, Thorns, Evergreens, etc.

**JAPANESE AND ENGLISH NURSERY
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Jap. Maples, Sciadopitys, Thuya Obtusa, Aza-
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RAFFIA. Red Star Brand and other grades.
WRITE US for catalogues, special lists on
any of this stock.

SHIPPING. We have our own Custom
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PEAR PSYLLA

THE worst enemy of the Pear Growers cannot be controlled
with lime sulphur, but "**SCALECIDE**" used in the spring
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PRICES: In barrels and half barrels, 50c per gallon;
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Will have the most complete stock of trees and plants to
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FLORIDA AND TEXAS NURSERIES

For delivery season 1911-12 ever offered in the South

We Can Probably Supply Your Wants

Budded Pecans, Japanese Persimmons, Figs, Musca-
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Nana and other Conifers, Eucalyptus and Camphor
Trees are a few of our leaders.

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Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
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Have a large stock stored in frost proof cellars that can be shipped at any time desired;
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STANDARD PEARS in assortment DUCHESSE DWARF PEARS BOURGEAT QUINCE
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Moss

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PEARS

PLUMS

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1200 Acres

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With or Without Ball

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offer to the trade an unusually complete assortment of Fruit and Ornamental Stock, including some things scarce and hard-to-find; their Tree Hydrangeas, Tree Lilacs, Roses, Clematis, Ampelopsis Veitchii, Dwarf Apples, Cherries on Mazzard, and a few other Specialties, have earned for the J & P goods the name of

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Jackson & Perkins Company

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PEACH PLUM

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63 Years

700 Acres

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APPLE, assorted, heavy in light grades

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CHERRY, 2 year, the finest stock we have ever grown

PLUM, Japan and English, good assortment of varieties

PEACH, choice stock in all grades

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ARBOR VITAE, 2 to 8 ft.

NORWAY SPRUCE, 2 to 8 ft.

ARBOR VITAE, 2 to 4 ft.

BALSAM FIR, 2 to 5 ft.

These evergreens have been transplanted, and are fine specimen plants. Can supply in carload lots

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We offer for FALL 1910 and SPRING 1911

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PEAR, STANDARD, Kieffer, 2 and 3 year, and other leading kinds.

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ASPARAGUS, 1 and 2 year; Palmetto, Barr's, Conover's Giant.

CHERRY, 2 yr. leading varieties.

PRIVET, 1 and 2 year, a fine lot of heavy No. 1 plants.

POPLARS, a fine lot of Carolina and Lombardy in all sizes, by the carload.

PLANES, a fine lot of Oriental Planes in all sizes.

CATALPA SPECIOSA, several thousand at a low price.

ELMS, AMERICAN; Several hundred nice trees.

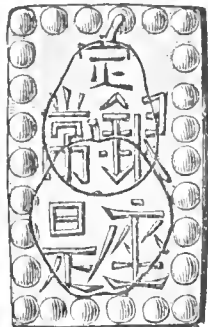
WALNUTS, JAPAN, in all sizes.

Extra large bushy SHRUBS, such as Altheas, Weigelas, Spireas, Deutzias, Snowballs, Judas, Hydrangea, P. G.

Extra large SUGAR MAPLES several hundred 3 to 3 1-2 and 4 to 4 1-2 inches, fine trees, with good heads and straight bodies.

We also have a general line of other stock. Send us your want list.

Heikes --- Huntsville --- Trees



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Wholesale Nurseries

Huntsville, Ala.

JESSIE S. MOSS, Prop.

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SPECIALTIES

APPLES—Commercial varieties, one year, in large supply. As fine in quality as ever grown.

PEARS—Kieffers, one and two years old. A much smaller crop than heretofore.

CHERRIES—On Mazzard. One year. Bing, Lambert, Napoleon, Black Tartarian.

CHERRIES—On Mahaleb. One and two years. Ea. Richmond, Dyehouse, Montmorency, Wragg, Royal Duke, in small supply.

PEACHES—We excel in Peaches, and of these we will have as fine a stock as we have ever grown, both in one year and June Buds.

ROSES—Budded. We will have a large and fine stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.

PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.

MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

See Price List for particulars.

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HUNTSVILLE, ALA.

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Rawhide Brand of Shipping Tags and Tree Labels

printed or plain, strung or wired?



This stock is especially adapted to the most severe usage, being thoroughly waterproof & weather-proof. "Once used, always used."

Send for samples and prices. Our reference are the largest nursery men in the United States.

The Denney Tag Co.

WEST CHESTER, PENNSYLVANIA

RAFFIA

FOR BUDDING

For tying buds there is nothing better than a good grade of Raffia—but it must be good. That is important. The success and saving of time in your work will largely depend upon the quality of the Raffia.

We know the importance of good quality in Raffia and we only handle material that will give entire satisfaction. Our Red Star Brand has been on the market for many years and it pleases all who use it. It is the most satisfactory brand that you can purchase and you assume no risk in buying it as every pound is guaranteed. It is just the quality that nurserymen want. We know it is because they tell us so. To use their own words: "It is fine and just what we need."

You know how annoying and unsatisfactory a poor grade of Raffia is, and in ordering, you should make it a point not to take just anything as long as it is Raffia and may seem cheap. Be particular and demand the best. Order Red Star Brand and you will get the best value in Raffia that you ever had for your money.

Budding time is drawing near. How about your supply? Will you need a new lot this year? May we have your order? We can make immediate shipment or will hold for later delivery as you may desire. Send for our price list.

THOMAS MEEHAN & SONS

DRESHER, near Philadelphia, PA.

BOBBINK & ATKINS

WORLD'S CHOICEST NURSERY PRODUCTS

- | | |
|---|--|
| ROSES, in all kinds and varieties | PALMS and BAY TREES by the thousands |
| EVERGREENS and CONIFERS, in several hundred kinds and varieties | Pot-grown FORCING PLANTS, Autumn Delivery |
| RHODODENDRONS, Hardy, ENGLISH HYBRIDS, Maximum and Catawbiense | FRUIT-TREES, home-grown, imported, DWARF and TRAINED |
| BOXWOOD, in all shapes, forms and sizes | SMALL FRUIT, in all kinds and varieties |
| HARDY AZALEAS, in all varieties and colors | NUT TREES, profitable kinds |
| FLOWERING SHRUBS, in bush and standard forms in hundreds of kinds and varieties | OLD-FASHIONED, Hardy FLOWERING PLANTS, in thousands of kinds and varieties |
| JAPANESE MAPLE, in all colors and varieties | PAEONIAS, IRIS, PHLOX FERNs, HARDY GRASS |
| SHADE TREES, in hundreds of useful and attractive varieties | KITCHEN HERBS and ROOTS |
| MAGNOLIAS and other FLOWERING TREES | RUTHERFORD PARK LAWN GRASS SEED |
| WEeping and STANDARD TREES, in many varieties | AUTUMN BULBS, Dutch, French and Japanese kinds |
| HEDGE PLANTS, in all popular kinds | Interior and Exterior DECORATIVE PLANTS, in large variety |
| HARDY TRAILING VINES and CLIMBERS | VISITORS to our nurseries are always welcome |
| HARDY VINES and CLIMBERS in pots | ASK FOR WHOLESALE CATALOG |
| SPRING and SUMMER FLOWERING BULBS, ROOTS and PLANTS | |

Nurserymen, Florists and Planters
RUTHERFORD, N. J.

Another Place to Buy Catalogs





WE have the pleasure of announcing to the Nursery Trade that preparations in our Designing, Illustrating, and Printing Departments have been completed, and we shall enter the nation-wide field of Nursery Printing during the season of 1911-12.

For about twenty years our plant has been turning out this work in a limited way and we have built up a very satisfactory business. A demand heavier than our capacity could meet grew upon us however, so a little over a year ago the management determined to put our organization and equipment in shape to handle the increasing volume of the better grade of Nursery Printing.

In order to meet the situation adequately we have doubled our floor space and added materially to the mechanical equipment of our plant during the past year. Our Designing, Illustrating and Photographic Departments are up to all requirements and are at the disposal of those who need them.

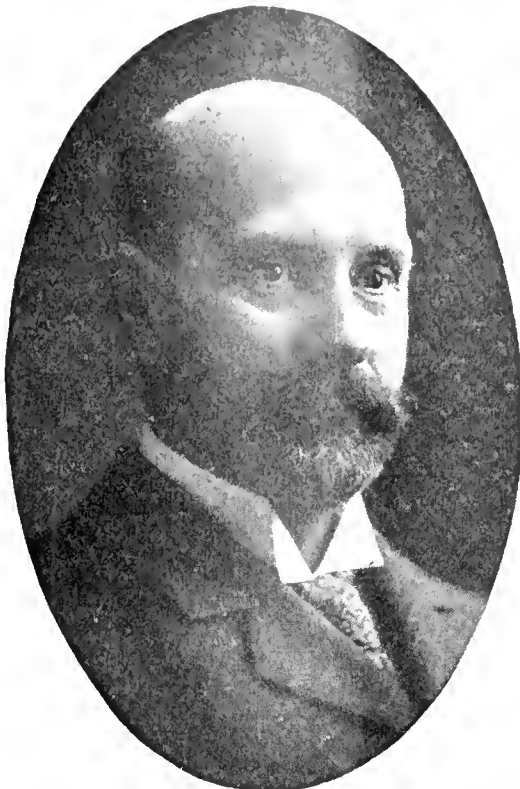
We can assure a product in the line of covers, catalogs, or special printing in black or colors on a par with the highest standards demanded by the most discriminating.

We solicit correspondence.

A. B. MORSE COMPANY, St. Joseph, Michigan
Designers, Illustrators, Printers of Nursery and Seed Catalogs



WM. PITKIN, Rochester, N. Y.
Legislation east of Mississippi River



IRVING ROUSE, Rochester, N. Y.
Tariff



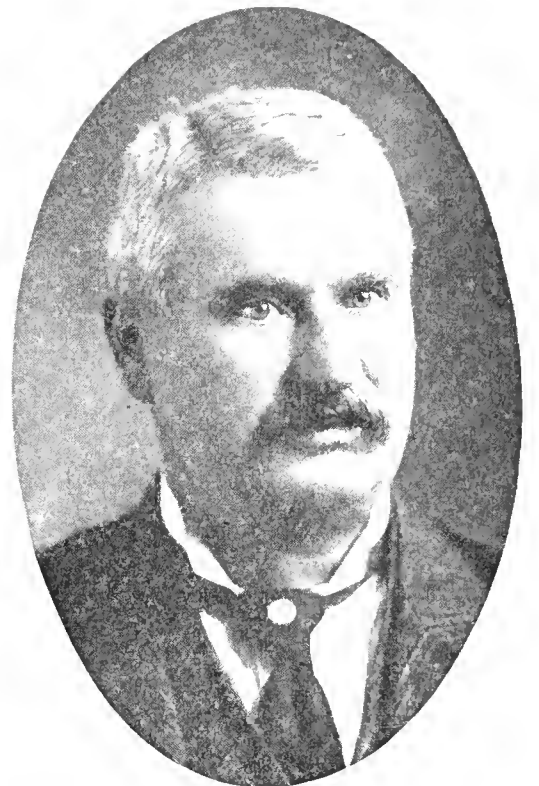
J. W. HILL, Des Moines, Ia.
Co-operation with Entomologists



ORLANDO HARRISON, Berlin, Md.
Publicity



J. W. SCHUETTE, St. Louis, Mo.
Exhibits



PETER YOUNGERS, Geneva, Nebr.
Legislation west of Mississippi River



J. H. DAYTON, Painesville, O.
Program



E. M. SHERMAN, Charles City, Ia.
Member Executive Committee



H. B. CHASE, Huntsville, Ala.
Member Executive Committee

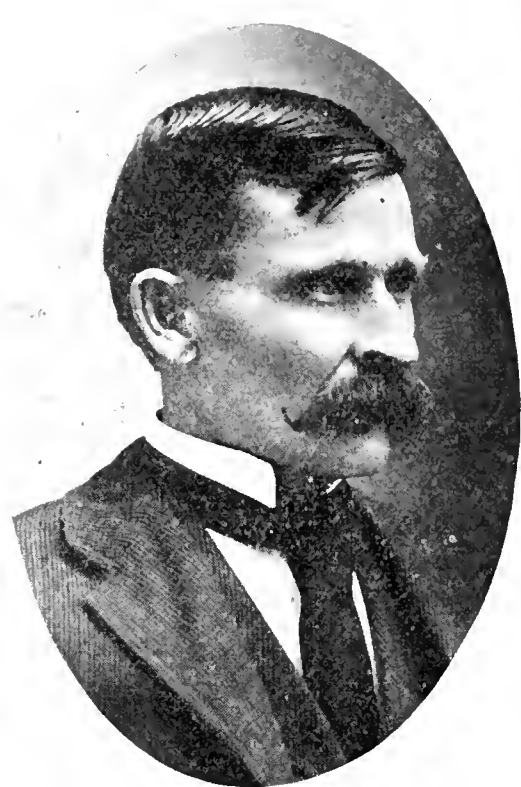
CHAIRMEN OF COMMITTEES, AMERICAN ASSOCIATION OF NURSERYMEN



F. A. WEBER, Nursery, Mo.
Entertainment



J. H. McFARLAND Harrisburg, Pa.
Nurserymen's Share in Civic Improvement



A. J. BROWN, Geneva, Nebr.
Forestry



E. S. WELCH, Shenandoah, Ia.
Vice-President



C. L. YATES, Rochester, N. Y.
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J. M. IRVINE, St. Joseph, Mo.
Co-operation with Fruit Growers and Ass'n.



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CHAIRMEN OF COMMITTEES, AMERICAN ASSOCIATION OF NURSERYMEN

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XIX.

ROCHESTER, N. Y., MAY, 1911

No. 5

THIRTY-SIXTH ANNUAL CONVENTION OF AMERICAN ASSOCIATION OF NURSERYMEN

St. Louis, Mo., June 14, 15 and 16, 1911

Headquarters, The Southern Hotel. Secretary Hall's Circular

"The hawthorn-trees blow in the dew, of the morning,"

The time for the coming together of our membership is near at hand, and, with echoes of the splendidly-successful Denver convention still fresh in our memory, we are called upon to announce the thirty-sixth annual gathering of our Association.

When we review the record of achievements by this organization, each one of which has secured large benefits to the trade generally, we are surprised that there are so many nurserymen, in every State of the Union, who are still unidentified with the Association. Surely they do not fully appreciate what a membership with us means! It is no small privilege members enjoy in being able to annually touch elbows with their brethren from far and near, and to listen to valuable papers and discussions on topics of vital importance to each. Whilst certain portions of the time are thus occupied, the management, fully believing in the old adage that "All work and no play makes Jack a dull boy," caters also to the social and recreative, and a reference to the program prepared by the Entertainment Committee will furnish an idea of their plans.

"In union there is strength" may be an "old saw," but it is none the less true, and we repeat what we said in last year's circular: "We are satisfied that there are many nurserymen still to be secured as members, and as a result, a corresponding increase in interest and in influence to be developed."

We ask that each recipient of this document resolve to give immediate response. You can if you will. And your doing so will greatly facilitate the work of your Secretary in the registration of members and in the compilation and prompt publication of the Badge Book.

THE CONVENTION CITY FOR 1911

St. Louis has an altitude of 480 feet above sea level. It is built on rolling ground, rising, at some points, 200 feet above the level of the Mississippi River, and possesses a frontage of nineteen miles on the "Father of Waters." Beyond the third terrace the surface spreads out in a picturesque plateau. The climate is temperate and healthful.

The city is noted for the number and beauty of its public parks, which have an aggregate area of 3,200 acres, prominent among which are the Tower Grove Park and the famous Missouri Botanical Gardens.

In its public buildings St. Louis has much to be proud of. It boasts of a \$2,000,000 city hall; a \$6,000,000 U. S. Government Building, and a Chamber of Commerce building of sandstone in the Renaissance style. It has over 400 miles of streets, and its wide avenues and palatial residences are very attractive. The great bridge over the Mississippi is a marvel of engineering skill.

CONVENTION HEADQUARTERS

The selection of The Southern Hotel as headquarters was made after much consideration by the committee, including the president of the Association, the latter saying of it, "The ideal place for the nurserymen." The management of the hotel say: "The Southern covers an entire city block; is thoroughly fireproof; has about 400 large rooms every one with an outside exposure, about 150 of them with private bath. * * One large diningroom operated on the American plan, to comfortably seat 500 people, not a post or pillar in the room; also a smaller one operated on the same plan; four very handsome diningrooms used for our European cafés and restaurants. Our hotel lobby, the largest of any in the world, in the form of a Maltese cross,



W. P. STARK
President American Association of Nurserymen

has an entrance from each of the four streets by which it is bounded. The Southern is the only first-class hotel operated on both American and European plans in St. Louis. The Market-street car will bring you from Union Station direct to our doors. We are prepared to make you very liberal terms—the free use of such meeting and committee rooms as you may require, together with service; and a rate on the European plan of \$1.00 per day per person where two occupy the same room with one double bed; single rooms from \$1.50 per day up. Our \$1.50 and \$2.00 rooms to be \$1.00 additional where bed is furnished for each additional person; rooms with private bath from \$2.50 per day up single and from \$4.00 per day up for two people. American plan rates from \$3.00 per day up.”

HOTEL RESERVATIONS

The Southern Hotel people promise that they “will not refuse any reservation as long as vacant rooms are at our disposal, and will use every effort to see that our members are satisfactorily cared for.”

Our advice to all is that they write immediately to Henry C. Lewis, Manager. The Southern Hotel, St. Louis, Mo.

MEMBERSHIP

To join the American Association of Nurserymen costs Five Dollars. Send that amount to the Secretary the day you receive this notice. You will find a blank herewith. We ask your co-operation. You have everything to gain and nothing to lose by joining—while the Association as a whole will be materially strengthened thereby.

THE BADGE BOOK

In answer to the query—“What is it?” we reply, “an unique list of the live nurserymen of the country.” Not that all the live members of the trade are enrolled. Your name should be therein, if not there already. Every member is given a number immediately his fee is received by the Secretary, and the membership fee entitles you to publication of name and address only. If a member be alive to his privilege he will buy a space in the book for his advertisement, thereby attracting to himself the attention of every other member, for his badge contains his registration number, which he will attach to his coat and thus introduce himself to all who meet him at the Convention. You cannot afford to be off the list of advertisers. Primarily, for your own good, and next because this is a grand co-operative concern and deserves the support of all to enable it to successfully prosecute its work.

Rates for advertising will be found on blank herewith. If you order advertising with membership, send copy with order, as you cannot be assigned a number until space taken is known. If you order advertising and say copy will follow you get a later number than otherwise. Make name and copy clear. This will help to avoid mistakes.

THE EXHIBITS

For information under this head application should be made without delay to Mr. J. W. SCHUETTE, 5600 Gravois

Avenue, St. Louis, Mo., Chairman of Committee on Exhibits. Intending exhibitors should WRITE HIM NOW.

RAILROAD ARRANGEMENTS

After communicating with the different Railroad Associations we learn that no special rates will be authorized for members attending the Convention. The guarantee required is prohibitive as far as this Association is concerned. We, therefore, advise each member to consult with the local ticket agent in his locality regarding routes and rates. The sooner the better.

A “special party rate” may be obtained in cases where ten or more can gather at some central point, the conditions being that the same route be used both going and returning, all traveling on one and the same ticket.

RECREATION

Mr. Frank Weber, Chairman of the Entertainment Committee, advises us that the program, as outlined up to the present, includes visit to Missouri Botanical Gardens; automobile ride through the residence sections, the parks and main business sections of the city; “special car” trip for ladies only to a popular Summer Garden Theatre; “Shaw Banquet” for members, and a boat ride for all on the beautiful and majestic Mississippi river, with music and refreshments.

And there you are! Badge Book will contain detailed program. You may rest assured of a royal good time.

PROGRAM

The Committee on Program have decided to hold half-day sessions only for business, and it is their belief that if members will respond promptly and heartily to this arrangement the sessions can be made intensely interesting and exceedingly profitable.

Chairman J. H. Dayton’s desire has been to arrange for a program in which every member present will take part, recognizing the fact that free discussion following a few short papers on practical subjects by practical men will produce a fund of information that will make the annual report one of exceptional value.

Besides the usual introductory numbers several committees appointed by President Stark have had to deal with very live topics, and their reports will doubtless create much discussion. Then S. J. Hunter, State Entomologist of Kansas, will speak on “Nurserymen and Entomologists;” Dr. J. C. Whitten, Prof. of Horticulture in the University of Missouri, will talk on “Spring versus Fall Planting of Fruit Trees.” The Professor has been conducting experiments along this line for a number of years.

The balance of the time will be taken up with the discussion of such questions as “Ethics of our Business,” “How to Extend our Markets at Wholesale and Retail,” “Standardization of Prices at Retail and Wholesale,” “Standardization of Grades,” “Mailing Lists—Should They be Classified?” “Who are Entitled to Trade Lists?” “How Best Kept Up to Date,” “Should Large Buyers not in the Trade, such as Parks, Cemeteries, Public Institutions, etc., be given Trade Prices.”

These questions will be opened by short papers or talks by such practical men as Harlan P. Kelsey, J. M. Pitkin, F. H. Stannard, Abner Hoopes, T. J. Smith, W. H. Maloney, C. J. Maloy, E. W. Kirkpatrick, H. C. Chase, E. S. Welch, Wm. Pitkin, T. B. Meehan and others. Every member should go prepared to participate in the discussions.

ENTERTAINMENT

The chairman of the entertainment committee, Mr. Frank Weber, is well known for his resources and ability in this line. He has made tentative arrangements which, if carried out, will more than occupy in a very agreeable manner the time which the members can devote to pleasure and recreation. Mr. Weber says:

"I have just forwarded to Mr. John Hall a preliminary program as outlined, which of course should be accepted with a large BUT, as this entertainment cannot be carried out to the letter unless the funds derived from the letter I am going to send to all of the members are sufficient to carry it through.

To give a boat ride on the Mississippi River with a dinner on board would run us in the neighborhood of \$1,000, but it would be a fine trip, and I feel assured it would be appreciated by all. I am giving you the program as outlined, and if you have not already received it from Secretary Hall you can use this."

He also points out that it will be necessary to secure responses from his circular letter early enough to make final arrangements for the various features of the program. This is very important, and members should co-operate with Chairman Weber in every way possible, so that this part of the program may be run off without any hitch. Mr. Weber's letter to the members of the Association is as follows:

NURSERY, MO., ————— 1911.

To the Members of the American Association of Nurserymen:

As our worthy President has seen fit to appoint your humble servant Chairman of the "Entertainment Committee" for our coming St. Louis Convention, it has given me no little worry as to what to provide in the way of suitable entertainment for the members, and especially for the ladies, during convention week.

We still have a nice little "Nest Egg" left over from our Denver Convention Entertainment Fund, (subscribed by the western nurserymen), which has been voted for the use of our 1911 Convention. Yet this will not be sufficient to provide for suitable entertainment for this year's Convention, and it has been suggested that the Chairman solicit additional funds from favorably inclined members.

The entertainment will not be as elaborate as it was at the Denver Convention, it being deemed advisable by many members to curtail the Entertainment features somewhat—but provide for the ladies in good measure and a few good things for the men. So, with these instructions, I have decided to arrange the entertainment about as follows:

First afternoon: A visit to the Missouri Botanical Gardens—for members and ladies. The evening will be

reserved for Protective Association Meetings or other business of the Association.

Second Afternoon and Evening: Seeing St. Louis either in special cars or automobiles, taking in residence sections, parks, Ladies Theatre Party, at one of our popular Summer Gardens.

Third Afternoon: A Boat Ride on the beautiful Mississippi River, with Music, Luncheon, and Refreshments; returning to St. Louis in time for outgoing trains.

So as not to disappoint anyone, a copy of this letter will be sent to all members and the Chairman hopes to have a liberal response.

We go to these Conventions to lay aside our many worries and to take a much needed rest for a few days, and a little pleasure after work is good for mind and body and gives us new life to renew the battle.

Every nurseryman should (if possible) attend these Conventions—Bring your hardworked wife, daughter, or son with you, they will enjoy the rest and recreation and will feel so much better for the trip.

Enclosed find subscription blank; fill in amount you will subscribe, sign your name and mail to the undersigned.

Remittances can be made during the latter part of May or first of June—when you are over the rush and have time to count the cash.

Yours fraternally,

F. A. WEBER, Chairman,
Entertainment committee, American Association of
Nurserymen, St. Louis Convention, June, 1911.

EXHIBITION HALL

Chairman Schuette of the Committee on Exhibits has been actively engaged in making satisfactory arrangements for the collection of the usual large exhibits. He writes as follows:

"I intend to write a personal letter to all exhibitors of the last two years about May first.

"The exhibition hall will be on the ground floor, it will be roomy, and there will be enough space to accommodate all. Any overflow can be accommodated in the rotunda, as you probably know the 'Southern' has the largest rotunda of any hotel in the country.

"The opportunity for exhibitors is probably the best they have had in many years, and I trust they will take advantage of it."

FARMING IN NEW HAMPSHIRE

The United States Department of Agriculture has recently been making an examination of the farming conditions in southern New Hampshire. The results are published in Circular No. 75 of the Bureau of Plant Industry. The deductions from this examination are that dairying and general farming are profitless occupations in that section, but that fruit growing and poultry raising are usually satisfactory, either singly or in combination. Some other points brought out are that the period of greatest productivity in the farmer's life is co-ordinate with the period of his greatest physical ability. This is not a surprising conclusion. In other words, the farmer's earning capacity is greater before he reaches the age of fifty than after he passes that period.

EDITORIAL WANDERINGS

South Georgia and North Florida: Desultory Observations

Leaving frozen ground, being rapidly sheeted with falling sleet and snow, in central New York on April fifth, it was most agreeable to be greeted with a brilliant display of flowers and sunshine the following day in Charleston, South Carolina. Signs of the change were heralded from the woodside and field from Washington southward by blossoms of red maple, red bud, and May apples; but in Charleston the oaks and hardwoods were in full leaf, and the pecan trees pushing their catkins.

As the traveller visits this region from time to time, he is strongly impressed by unmistakable signs of industrial activity, and in the region of Charleston of aggressive civic growth. The city of Charleston will soon have more than its historic associations to hark back to; for large development enterprises are under way, and these are based on sound footing, for Charleston Harbor is rapidly taking its place as one of the great Atlantic ports of this country. It is probably not generally known that it will admit vessels of deepest draft. In this harbor, protected by its islands, we have an interesting mingling of the picturesque and the rich agricultural lands. This region has been noted as a great truck section for many years, and its interests in these lines are constantly increasing. Cabbage, cauliflower, and potatoes are the great crops, while asparagus and other early spring vegetables are also occupying large areas. We hear of one man sowing six thousand pounds of cabbage seed the present season. This does not mean that he will set all of the plants from this amount of seed himself, but it does presage the growing of an immense number of cabbage plants either for setting by himself or for sale.

One of the features of Charleston is the famous magnolia gardens, gardens rich in roses and rhododendrons, laid out in the old fashioned plan, possessing all the charm of the well developed formal garden. In the rhododendron season, it is a noted attraction to visiting tourists.

In this section also is one of the oldest and largest bearing pecan orchards in the country. It is the work of a man who had faith in the nut and kept on setting trees year after year. Although his labors were almost derided by his neighbors, he has now the satisfaction of possessing an investment which is giving him a return of eighteen to twenty thousand dollars per year.

In the vicinity of Charleston, the south-going visitor receives an introduction to the palmetto, the live oak, and its frequent associate, the pendent moss. These are all striking features of the scenery from Charleston southward. No more picturesque feature on the landscape can be seen than one of these immense oaks, draped with its grey pendent coating of this interesting parasite.

IN SOUTH GEORGIA

In South Georgia and North Florida, the visitor is impressed by the rapid strides being made in clearing land,

extending cotton areas, and perhaps more than all else, in road improvement. The opportunity for cheap road improvement is exceptional. The red clay of the country makes admirable surfacing material, and then the state has the good sense to use its convict labor on this excellent feature, public service. County and state roads are opening up in all directions and driving and motoring are increasing in popularity.

Land values too are advancing steadily. The conditions of the whole country make this inevitable; for as one looks over the available farming areas of the United States, it resolves itself into a question of whether the settler of small means shall take up some of the cheap and more or less abandoned lands of New England and eastern New York, or go South. The lands of the Pacific Northwest are available principally to men of capital, and their area is limited by the availability of water. It is no idle prophecy to say that in the next ten years greater development will take place in the Carolinas, Georgia, Florida, and Alabama, than has occurred in the last fifty. There are splendid opportunities in general farming; but the farmer in that section must separate himself from local traditions as to methods of handling the land. Scratching the surface, as in the past, will not bring satisfactory results. Neither will the all too prevalent habit of depending on commercial fertilizers. Such staples as corn and cotton, cow peas and velvet beans, are profitable crops when grown in conjunction with a proper use of legumes and by the application of intelligent tillage methods.

THE PECAN

In certain sections, but to a greater or less extent throughout the Gulf States, the pecan as an orchard crop is attracting a good deal of attention. Groves are being planted by individuals, but to a much larger extent by development companies. It is a fact, though probably a regrettable one, that in some cases these companies are directed to a larger extent by optimism and enthusiasm than by sound information, much less actual experience. Disappointments are likely to arise, and a considerable percentage of failures may be expected.

Some pecan groves are now approaching the bearing age, and these are being watched with keen interest by prospective planters and by persons who are already involved. It is indeed a pity that industries should become exploiting fads, and that daring should take the place of knowledge and experience.

The signs of the season are that nursery work in general is active in the South. A demand for plants has been steady and large. Most nurserymen report an excellent season for the sale of plants; and in speaking of season, it reminds us to say that although we are somewhat later than normal in New England and New York, the season in South Georgia and Florida is two or three weeks in ad-

vance of the average. The winter was exceptionally mild, which resulted in premature opening of fruit blossoms. The frost of March affected disastrously the peach crop, and reports now have it that it will not average more than twenty or twenty-five per cent of a full crop for the state of Georgia. Notwithstanding these occasional drawbacks, the spirit of the farmer and fruit grower of the South is hopeful, and he looks forward to the future with confidence.

Business Movements

PACIFIC COAST FEARS FROST

Advices from the Northwest Pacific announce a heavy bloom of peach, cherry, and strawberry, but express a fear that late frosts will very materially reduce the crop. This frost bugaboo seems to be universal. It makes little difference whether a peach orchard is in central Georgia, in New England, or on the Pacific Coast, the frost phantom hovers in the offing.

A LARGE ORCHARD

The era of large orchard enterprises appears to be upon us. The Hampshire Middle Ridge Orchard Company of Springfield, West Virginia, announces that they have purchased a bearing orchard of 18,000 peach trees, and 2,000 apples in that region, where they already own 2,700 acres of land, with a view of developing a large orchard enterprise. They have an experienced manager, who is an expert in the handling and packing of fruit, and they expect to go into the market as producers of choice fruits.

A NEW WASHINGTON NURSERY

The Olympic Nature Nursery of Nellita, Washington, has been established by Mr. Joel Shomaker, who for a quarter of a century or more has been an agricultural editor and writer, and is president of the Washington Conservation Commission. Having overworked in the city, Mr. Shomaker is taking up nursery operations as a country life occupation, and endeavoring to build up a reliable enterprise in the Olympic region. Forest fires destroyed a considerable quantity of stock last year, but Mr. Shomaker is not discouraged, and is forging ahead persistently and intelligently.

AMARILLO, TEXAS

D. J. Muncy, for 21 years engaged in Floyd County in the nursery business, and later located at Lockney, is removing to this city and will this Spring set out two hundred thousand trees.—*Florists' Exchange*.

TEXAS A PROFITABLE FIELD

Certificates to the number of one hundred forty-two have been issued to nurseries outside of Texas, giving them authority to do business in that state. The latest firm to receive such a certificate was the Fairbury Nursery of Fairbury, Nebraska.

P. J. BERCKMANS COMPANY

AN IMPORTANT CORRECTION

In our issue of March, there appeared a paragraph credited to a Charleston paper, which gave the impression that the Berckmans Nursery was soon to pass out of the control of the sons into the hands of the widow of the late P. J. Berckmans. It appears that this item was inaccurate in statement, and we are glad to call attention to these inaccuracies. It is well known that the business of the Fruitland Nurseries is conducted by a corporation under the name of P. J. Berckmans Company. The stock of this company is owned or controlled by the three sons of the late Prosper J. Berckmans, and the company conducts its business upon land leased from the late Mr. Berckmans for a period covering the entire life of the corporation. The testament of the late Mr. Berckmans conveyed a portion of the leased lands to his wife, but this deed and his will in no way interfered with the lease of the company, so that the business of the Berckmans Company will be conducted, as heretofore, by the corporation; and at the expiration of its charter life, the majority stockholders, consisting of the Berckmans sons, will continue in the same business, either as a corporation, or as individuals. The tract of land left to them by their father is connected with other lands controlled and owned by themselves, all of which will prove an amply sufficient area for the conduct and enlargement of their business. Any impression leading to the belief that the Berckmans Company was to cease business, gathered from the former article, is entirely erroneous.

TARIFF

After reading in your paper that a protest, filed by the Jackson & Perkins Co., Newark, N. Y., contending, that "evergreen seedlings" should come in free of duty, regardless of age or size, was sustained, we instructed our customs broker to enter all evergreen seedlings of any size or age as merchandise free of duty. The result has been that evergreen seedlings under 2 feet were passed free, but those 2 feet and over had to pay 25 per cent ad valorem as nursery stock. I just arrived from Holland today and left your paper in Holland.

Our customs brokers want your paper, because the decisions as published by the Government every week are not as explicit as the report in your paper.

As soon as their entries are liquidated, they are going to file a protest, and we are collecting all the evidence we can secure.

New York.

C. GROOTENDORST.

PRACTICAL WORK

A demonstration in pruning and spraying was given early in May by the Connecticut Agricultural College and the Connecticut Pomological Society. An orchard of neglected trees was chosen for this purpose, and some work was also done on trees that were severely pruned last year. It was an excellent opportunity to observe practical work in orchard renovation.

INSPECTION METHODS IN COLORADO

W. C. Reed Tests Colorado Laws

Owing to the fact that we have had quite a large number of trees condemned in the State of Colorado, which we think were condemned unlawfully, I have been urged by a number of leading nurserymen who are members of the Western Association as well as National, to give the facts in the case to the NATIONAL NURSERYMAN. The facts in the case are as follows:

We had an order going to the Denver Suburban Homes & Water Company, of Denver, Colorado, consisting of some 85,000 trees. These trees were shipped in three cars, the first car shipped March 21st, containing 4,500 one-year apple, balance cherry. When they arrived, the local County Inspector condemned all apple as infected with crown gall and hairy root. The Denver Suburban Homes & Water Company wired me that all apple had been condemned and ordered burned. I immediately wired the chief nursery inspector of Denver County not to destroy any trees; that I would not stand for any such inspection but would come out and bring our State Inspector, if need be, and would fight the case even to the Superior Court; to take good care of the trees until my arrival. I also sent a similar telegram to the Denver Suburban Homes & Water Company.

HOME INSPECTION

On receipt of this information I immediately called Benjamin W. Douglas, State Entomologist for Indiana, and asked that he come down and examine the balance of the apple that were to be loaded in the third car. He sent his deputy, Mr. Wallace, and I told him the situation; that I wanted him to throw out every tree that was doubtful, and that I expected to carry the matter to the Courts, if need be. Mr. Wallace, our deputy inspector, went over the entire lot of apple, some 7,300 trees, opened each bunch and examined every tree carefully. He threw out 508 trees. We finished loading the car with cherry and apple, and I immediately followed the same to destination.

I had also written Professor Gillett, State Entomologist for Fort Collins, Colorado, stating the case plainly to him, and insisted that we had been severely damaged by the local County Inspector at Denver. He wrote me that it seemed very strange that an entire shipment of apple should be condemned, and that he would meet me in Denver, if needed, and if I had been done an injustice, would have the Inspector withdraw his report.

DRASTIC ACTION

Mr. Douglas, our State Entomologist of Indiana, wired Professor Gillett that he had inspected the apples loaded in third car and the number rejected, asking him to look into the matter personally. The second car, being enroute, arrived about April 3d, and all apple in second car numbering 4,050 were condemned and immediately burned, as also were the apple from the first car. The third car arrived at

destination, Tuesday, April 11th, and the writer also arrived the same day in company with Professor Gillett, the State Entomologist, and Mr. Rouncevelle, the County Inspector of Denver County. We proceeded to unload said car, and after going over same very carefully threw out 208 trees out of something over 7,000 apple, making a total of about 700 trees thrown out by the two different State Inspectors in something over 7,000 total, amounting to about 10 per cent. These trees were all one-year old apple, mostly dug from the same block, the same day, graded by the same men, and hauled into our packing house, from which the cars were loaded in rotation without any additional grading, except the inspection as above mentioned in third car. After the third car was unloaded, I demanded from the County Inspector an official notice as to what he had done with the trees in the third car. This he gave me at 2:30 P.M. April 13th, nine days after the trees had been burned in the two first cars.

COLORADO LAW

The law of Colorado specifies that when an Inspector condemns trees he shall notify the owner in writing, which he did not do except as above mentioned. I must also state that these trees were unloaded at Milvin Station, Arapahoe County, Colorado, fourteen miles from Denver. I immediately employed the leading firm of attorneys to look into the matter carefully, which they have done, and I am submitting their finding to the President and Executive Committee of the American Association of Nurserymen, also to the President and officers of the Western Association of Nurserymen, a number of whom I have already been in consultation with.

From all facts available, I am advised that we have a very clear case for damages. Also that there are a number of points in the law that are not constitutional. I am asking the officers above referred to as to their judgment in the matter of making this a test case, which can be tried in the United States Federal Court.

It seems to me that if we simply stand by and allow inspectors to destroy property without notice and without any reasonable cause, there is no telling when this kind of work will cease. While I don't know whether a judgment would be of any value whatever, financially, I think the effect it might have and also the securing of a perfect interpretation of the law might be well worth our time.

Having stated the cases as above, I am willing to leave it to the nurserymen and public in general whether I am right or wrong.

Respectfully yours,

Vincennes, Ind.

W. C. REED.

GOLDEN BELL

Never in our recollection has Forsythia Golden Bell made as handsome a show as this spring. It has been a mass of golden bloom for several days at Ithaca.

Exhibitions

THE GREATEST AMERICAN FLOWER SHOW

This is the name given by those who know to the National Flower Show held in Boston during March. So great was the success of the exhibition that the management has decided to hold a similar one in 1914, and thereafter triennially.

Plants and flowers from some of the most distant sections of the country, as well as from the leading wholesalers, retailers, and growers of the East, found a place in the exhibit, nor was this all; for materials used in building greenhouses were displayed, and different types of gardens as the Italian and Japanese, could be seen. One feature of the exhibition in Mechanics' Building was the splendid collection of bays which bordered some of the wide avenues arranged to imitate nature as closely as possible. These were exhibited by Bobbink & Atkins of Rutherford, New Jersey. The displays of roses and acacias by Thomas Roland of Nahant, Massachusetts, and of rambler roses by M. H. Walsh of Woods Hole, Massachusetts, were especially notable, and the Dutch garden of R. & J. Farquhar and Company of Boston caused many exclamations of pleasure. Of the sweet pea exhibits, the largest and most attractive was made by William Sim of Cliftondale, Massachusetts.

An exhibit representing a somewhat unusual type was the display of forced lilacs grown by Raimbault & Bruzeaud, Buena, N. J. There were forty-five varieties in this collection.

Society meetings as follows were held at the time of the exhibition: Special meeting Society of American Florists, special meeting American Gladiolus Society, twelfth annual meeting American Rose Society, twentieth annual meeting American Carnation Society; a brief session of the National Sweet Pea Society, the annual convention to be held June 22 and 23 in Philadelphia.

PLAN GREAT FARMING EXHIBITION FOR MADISON SQUARE GARDEN NEXT FALL

New York City's first land show will be held at Madison Square Garden, November 3 to November 12, 1911. Preliminary arrangements for this event, which will be known as the American Land and Irrigation Exposition, have been completed and the organizers have obtained the co-operation of an advisory board consisting of the Governors of thirty states, the presidents of many railroads in the United States and Canada and agricultural experts from every section of the country. It is planned to have the exposition made an annual event.

It is the purpose of the managers of the land show to give demonstrations of the possibilities of land culture in America and to exhibit products of the soil from different sections of the continent. To stimulate the interest of the producers in preparing samples of their best crops for exhibition many valuable prizes have been offered for the best samples of wheat, barley, hops, sugar beets, apples, corn and other products. James J. Hill and Louis W. Hill, of the Great Northern Railroad; Colonel Robert M. Thomp-

son, Gustav Pabst and Horace Havemeyer are among those who have donated prizes.

TO SHOW DEVELOPMENT

One of the features of the exposition will be a department in which will be depicted the history of American agriculture from the time of the Colorado cliff dwellers to the present day of irrigation valleys in Utah and California and the reclamation of the Florida Everglades. In the department devoted to the demonstrations of modern scientific farming there will be given illustrations of dry farming and agriculture under irrigation.

The organizers of the land show expect that the United States government, the Canadian government and the Mexican government will provide for exhibits that will prove valuable from an educational standpoint. Preparations have already been made for the sending of exhibits by leading railroads, many of the states of the South and West, chambers of commerce and agricultural associations. These exhibits will consist of maps, pictures of holdings, samples of products and interesting data concerning cost of production. Pamphlets covering most of the questions regarding the profitable tilling of the soil will be distributed by these exhibitors.

Lectures in which every branch of agriculture will be touched on will be given every afternoon and evening in a lecture hall seating about twelve hundred persons. This lecture room will open directly upon the exposition floor. Men prominent in their respective lines of agriculture development will give the lectures. Choral, band and orchestral music will be given throughout the day and evening.

MANY PRIZES OFFERED

As an attraction the management of the exposition has arranged to give away daily to visitors at the show farms, orchards or tracts of irrigated land. The prizes that have been offered for the best samples of various products have been donated by some of the most prominent men in the United States. James J. Hill, president of the Great Northern Railroad, has offered a cup valued at \$1,000 for the best exhibit of wheat grown in the United States and Sir Thomas Shaughnessy, of the Canadian Pacific Railroad, has given \$1,000 in gold for the best one hundred pounds of hard, red spring or winter wheat grown anywhere in the two Americas. Colonel Robert M. Thompson, of New York city, has given a prize cup valued at \$1,000 for the best cotton, giving the largest yield per acre.

A \$1,000 prize cup for the best corn has been offered by Cyrus H. McCormick, president of the International Harvester Company of America, and Horace Havemeyer has offered a \$1,000 cup for the best sugar beets grown in the United States. Gustav Pabst, of Milwaukee, has given a \$1,000 prize for the best barley grown in the United States, and Adolphus Busch, of St. Louis, has donated a similar prize for the best hops grown in this country. A. J. Earling, president of the Chicago, Milwaukee and St. Paul Railroad, has given a prize of \$1,000 for the best exhibit of oats.

Among the Experiment Station Workers

THE HARDY CATALPA IN IOWA, Bulletin 120, Iowa State Experiment Station.

This bulletin claims that the hardy catalpa is one of the best fence post trees that can be grown in Iowa. It reaches its best development in from 16 to 20 years, growing in this time from 30 to 40 feet in height, with a diameter of from seven to eight inches. Such trees will cut three six and one-half foot posts.

The author calls attention to the fact that the tree is not quite hardy in Iowa, and as a result of this, the terminal buds are killed back, resulting in deflection of the main stem, and more serious still, the decay of the affected portion. For this reason, the tree is not a satisfactory telephone or telegraph pole tree. It is recommended that one year seedlings be planted, and that these be set 6 x 6 feet apart, given thorough cultivation, and protected from rabbits for the first two winters by the use of wooden shields. When the crop is harvested in 15 or 16 years by cutting to a 12 to 15 inch stump, it may be expected that a second crop, arising from sprouts from the old stumps, may be secured. It is very important that the *hardy* catalpa should be used. This is the only one which will stand northern conditions, and the only one worth growing for post timber purposes.

ORCHARD HEATING, Press Bulletin 22, Iowa State Experiment Station.

A great deal of interest is now being manifested in the possibility of warding off the injurious effects of frosts by heating devices applied directly to the orchard air. This circular discusses the kind of fuel to use and recommends oil as being cheaper in Iowa than coal. The equipment for coal heating, however, is cheaper than for oil. From seventy-five to one hundred twenty heaters are required per acre. The oil pots are filled by driving a tank wagon between the rows of pots, and depositing the oil by means of hose which carry it from the tank to the fire pot. The following estimate of cost of orchard heating is submitted. This estimate is for a ten-acre orchard with one hundred oil heaters to the acre.

1,000 heaters at 20-45 cents each	.....	\$200 to \$450
3,000 to 6,000 gallons of oil at 3 cts per gal	.....	\$90 to 180
Labor	.....	5 to 10
Storage for oil	.....	50 to 100
Tank wagon	.....	15 to 25
		<hr/> \$360 to \$765

Contrasted with this is the cost of installing the coal heaters which is as follows:

1,000 coal pots at 20 to 45 cents each	.....	\$200 to \$450
20 to 40 tons of coal at \$3.00 a ton	.....	60 to 120
Coal house	.....	25 to 50
Kindling and waste	.....	15 to 25
		<hr/> \$300 to \$645

Obituary

WILLIAM WEBSTER

On March 8, William Webster, who was believed to be the oldest landscape gardener and horticulturist in the country, died at Rochester, New York, at the age of ninety-four years. He came to America from England in 1828, and had a prominent part in the construction of some of the noted places of beauty in this country.

PROGRESS IN ALABAMA

Nurserymen are having a picnic in this section, and a big acreage is now being planted in fruits, principally peaches, but I think apples will lead next season. Stark Brothers of Missouri sent several boxes of select varieties of apples for free distribution at our State Horticultural meeting at Birmingham a few weeks since. This has started the ball in motion, as such fruit is rarely seen in the South, but I have seen some wonderful specimens grown on this mountain plateau without expert knowledge or care. A German banking firm has just bought 97,000 acres in this section for settlement by Germans in forty-acre tracts. This will show what can be done under careful culture and up-to-date practice.

Alabama.

THOMAS BRIGDEN.

PEACH SEED

The possibility of getting natural seed, free from taint of "yellows" and other communicable diseases, seems to be getting more and more remote. In addition to the fact that Northern Nurserymen must secure their crop from points in the far South, in a region almost inaccessible, there are delays on the part of irresponsible railroads to be combatted, and last but not least, our interests must be placed in the hands of persons or concerns who do not seem to realize the prime importance of the proposition.

Several times recently seed ordered in the middle of the summer and paid for in order to guarantee early delivery and permit of Fall planting, have not arrived until Winters "snowy pinions" filled the air—compelling the process of stratifying—unsatisfactory in this latitude.

The worst is, however, that when we order "Natural Tennessee seed" it is likely to come from Virginia, or—Michigan! Some enterprising seed gatherer hailing from Oklahoma or thereabouts is, we understand, getting an option on Michigan canning factory outputs.

Recently the writer ordered natural Tennessee seed and paid for it. Word came that that particular "brand" was all sold out, but natural North Carolina seed was just as good and could be furnished at the same price. So, we took that, but when the seed came it was Smock pits, advertised by the same seed gatherer at half the price of the seed paid for, and it took a year or two to get a rebate.

Now, it seems to me, that it will pay nurserymen to howl, and howl good and loud, whenever they are victimized in this manner, and perhaps persistent, vociferous, and united protests will relieve the situation somewhat. Perhaps we are isolated instances, however. Perhaps? !

L. P. THURSTON.

Fruit and Plant Notes

HOW TO BLANCH THE NEW JAPANESE VEGETABLE, UDO

Call to your Gardener's attention at once.

The spring treatment of Udo should be begun before growth starts and the following methods are advised:

Get a number of unglazed six inch drain tiles one foot long, chip the edge of the inside of one end, turn this end down on a smooth board, pour about an inch of wet cement into the tile, and let it harden. This will make a light-tight porous plug.

Invert these tiles over the hills of Udo, making sure by scraping away the dirt that they cover completely all the buds to be found there. Cover the tiles with straw or leaves or light dirt, at least enough to shut out any light from below, and from time to time lift the tiles to see how the shoots are coming on. If the Udo plants made a vigorous growth last summer, these young roots should produce this season from four to six good sized shoots, some of which may touch the cement plug.

If it is difficult to get these tiles, an old jar or pickle keg can be put over each hill, or if this is not available, mound up over the hill, to a height of 24 inches, light and very well rotted manure, and when the shoots come nearly through this covering, dig down and cut them for the table.

It is essential that the shoots be not exposed to the light while growing, as they turn green and take on a rank flavor.

Udo has a decided flavor, peculiar to it. This flavor is unpleasant if too strong, just as the flavor of green celery is unpleasant. It may be cooked in the following way: peel the shoots and drop them into cold water. Cut them into four-inch lengths. Boil them in salt water for ten minutes, then change the water, adding a fresh quantity of salted water, and boil until quite soft. Prepare a white sauce such as is used for cauliflower or asparagus, put the Udo in it, and allow it to simmer until thoroughly soft. Serve on toast in the usual way. If there is too much of the pine taste in the shoots after preparation, a second change of water will remedy this.

Those who learn to like the wild flavor of the Udo when cooked will want to try it as an uncooked salad, in which form it is most attractive looking. To do this, peel the shoots, cut into three-inch lengths, and then shave the stems into thin shavings, letting the latter fall into ice water as they are made. Allow them to soak in ice water for a half hour or so to remove the turpentine taste and then serve with a French dressing of vinegar, olive oil, salt, and pepper. Do not dress the shavings until just before serving as they become stringy on standing in oil.

The butt ends and pieces too small for salad can be made into an excellent soup, which is prepared just as one does celery soup.

This Office would be glad to know what success you have with this vegetable and how you like it.

DANIEL FAIRCHILD, Agricultural Explorer in Charge.

HARDY APPLE STOCKS FOR THE NORTH

PROFESSOR MACOUN Recommends Hardest Varieties of Crabs for Northern Canada

He says, "We find at Ottawa that we get the most satisfactory results from root grafting our trees on crab apple stock, and the reason we think crab apple stock is most desirable is this: In the cold parts of the country, as well as New Brunswick, Quebec, and Eastern Ontario, we find that apple trees will not succeed on as cold soils as they will in the south of Ontario or the Annapolis Valley, hence it is most important if we cannot have the soil as well drained as we desire to have roots which will withstand such as nearly as possible. Crab apple trees will succeed in cold soils much better than apple; you will find them growing in wet land where apples would not stand. We believe for our conditions it is well to have our apple trees grafted or budded on these hardy roots, for being able to withstand the colder condition of the soil means that the tree will do better. After twelve years' experience, I am more and more confirmed in this opinion. We sow the seed of the Martha, Whitney, or Hyslop in the fall and make nursery beds; the first thing in the spring these seeds will germinate and almost every seed will come up. We leave the seedlings in the beds for that winter; the following spring we set them out in the nursery, putting the trees six inches apart in rows three feet apart. You can either leave these trees for budding or use them for root grafting. We prefer root grafting, for the reason that if the farmer is going to have a small nursery it is much easier to graft in the winter than in the summer, when one is usually very busy. The second year we dig up these young trees and heel them in, in the cellar, and during the months of February and March we root graft on these stocks.

BEN DAVIS IN MISSOURI

The following extracts are taken from a statement by Prof. W. L. Howard, of Columbia, Missouri, recently published in the *New York Packer*:

"There are probably thirty million apple trees in Missouri. Of this number perhaps 75% are Ben Davis, or varieties equally poor in general qualities. . . . Many of these orchards are of trees from 10 to 20 years old, and growers have hesitated to uproot them. . . . A system of topgrafting has been undertaken which promises to add greatly to the wealth of the state. . . . The Darby Fruit Farm of Amoret is practicing this method of topgrafting on a larger scale than at any other place. . . . There is no reason for having undesirable trees in an orchard when the system of topgrafting is so easy and results follow so quickly. Trees up to 20 years old may be successfully topgrafted and if quite vigorous they may be transformed into producers of very profitable varieties of fruit when considerably older. One of our students at the college of horticulture here has recently topgrafted an orchard near Troy, Mo. He used varieties of such high quality as Grimes Golden, Jonathan, Delicious and King David, to replace Ben Davis and Wolf River. The increase in the value of the orchard's product by the substitution of varieties like the Grimes Golden and Jonathan, or frost resistant varieties like the Ingram, would be very great in comparison with the cost of topgrafting."

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Association of Oklahoma Nurserymen—President, J. A. Lopeman, Enid, Okla. Terr.; secretary, C. E. Garce, Noble, Okla. Terr.

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Eastern Association of Nurserymen—President, Wm. Pitkin, Rochester, N. Y.; secretary-treasurer, William Pitkin, Rochester, N. Y. Meets annually in January.

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Tennessee Nurserymen's Association—President, A. I. Smith, Knoxville, Tenn.; secretary, G. M. Bentley, Knoxville, Tenn.

Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.

Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans. secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City.

THE BADGE BOOK

It is hardly necessary for us to add a word to the appeal of the Secretary on behalf of the annual badge book. This is the official nurserymen's dictionary. It is the means of introducing the new member to his friends, and at the same time the medium by which the regular member maintains his standing in the Association. The badge book can only be maintained by the interested assistance of the members. Aside from these considerations, it stands as its own justification as an advertising medium, and as a ready directory of the active men in the Association during the interim between meetings. No one can afford to be without it. Respond, then, promptly to Secretary Hall's circular, so that he may be able to get out his badge book promptly, and have it in the hands of the membership in good time, and thus greatly enhance its value.

GRADING NURSERY STOCK

In no branch of industrial activity are standards of greater necessity than in the nursery business. A No. 1 tree undefined may mean one thing to one man and quite a different thing to another grower. Unless standards are adopted to define qualities of nursery stock, how shall we decide that a given grade represents A No. 1? Is it not this indefiniteness as to what A1 or A2 or A3 represents which is responsible for many of the misunderstandings arising between nurserymen in the course of their dealings? The ideals of one nurseryman may be graded up high, while those of another slightly more lax are relatively low as to what constitutes a No. 1 apple tree. When, therefore, in the course of business, Mr. A buys of Mr. B a lot of cherries and peaches, pays according to first grade prices, and receives, according to his views, second grade stock, there is naturally a strong kick coming, and probably a vigorous kick delivered. Our point is that much of this sort of misunderstanding could be obviated by the establishment of descriptions which would clearly define different grades of nursery stock. A set of standards agreed to by the American Association of Nurserymen would go a long way towards improving the quality of the stock grown, and incidentally improving the prices paid for stock of good quality.

PROGRAM FOR THE ST. LOUIS CONVENTION

Chairman Dayton in charge of the program of the St. Louis convention has been making a vigorous effort to secure a program provided by nurserymen themselves. The demand and cry has been in the past that too little time has been available for discussion, and it has also been remarked that the time of the convention has in some cases been largely occupied by addresses from persons outside the nursery fraternity. The chairman of the program committee on this occasion has been making strong efforts to overcome this criticism, and to a considerable degree has been successful, as shown by the statement which he presents below.

There are three subjects which, in our judgment, it would be very desirable to have presented and thoroughly discussed at this meeting. One is the much discussed topic of root gall in its relation to the health and productivity of fruit trees. Dr. Erwin F. Smith has presented the latest on this subject, and will be well qualified to give a paper.

Another topic is the question of inspection of imported nursery stock. The views of government officials and nurserymen are not in accord on this question, and an open and above board discussion would probably do much to clear the atmosphere. Dr. L. O. Howard, United States Entomologist, is the man to present this subject.

The third topic which, in our judgment, could be discussed with much profit is the establishment of standard grades for nursery stock. If the American Association of Nurserymen should establish definite standards for the different grades covering fruits and ornamental trees, an important step would be taken. We have no suggestions as to the person or persons best qualified to prepare and present this topic, and leave it open for the consideration of the program committee.

THE PROGRAM

By CHAIRMAN DAYTON

For a great many years, I have heard considerable talk, that we ought to have at our Nurserymen's Convention more discussions and more addresses on practical questions by nurserymen who are actually engaged in the business. I have been trying hard to work up a program along these lines, but guess the shot gun would be the only persuasion that could convince most nurserymen that it was their duty to talk in meeting. However, I think I have a pretty good list of practical nurserymen, such men as H. P. Kelsey, J. M. and Wm. Pitkin, F. H. Stannard, Abner Hoopes, J. H. Maloney, T. J. Smith, C. J. Maloy, E. W. Kirkpatrick, H. C. Chase, E. S. Welch, T. B. Meehan, etc., to present subjects along the line of "Ethics of our Business," "How to Extend Our Markets at Wholesale and Retail," "Standardization of Prices at Wholesale and Retail," "Mailing Lists, Should They Be Classified?" "Who Are Entitled to Trade Lists?", "How Best Kept Up to Date?" "Should Large Buyers Not in the Trade, Such as Parks, Cemeteries, Public Institutions, etc., Be Given Trade Prices?" etc.

My idea is to have each of these subjects handled by short papers or talks, to introduce them, by one or two men, and to have a large share of the Convention given up to discussions on such questions as the above, together with the discussions of reports of the committees. As you know, our President has appointed several new committees this year, dealing with very important questions, all of which should be discussed by the Convention. It is hoped that every nurseryman who attends will come prepared to take part in the various discussions.

There will also be papers presented by Prof. S. J. Hunter, State Entomologist of Kansas, on "Nurserymen and Entomologists," and Dr. J. C. Whitten, of the University

of Missouri, on "Spring Versus Fall Planting of Fruit Trees." Dr. Whitten has been conducting experiments along this line for a number of years.

The intention is to have one long session each day, giving up the afternoons and evenings to the various Committees, Protective Associations, etc., and to the Entertainment Committee.
J. H. DAYTON.

CLIMATIC INFLUENCES

The influence of climate on varieties of fruits adapted to different regions is noticeable, no matter in what direction one may travel; but, of course, to a much less extent if his direction of movement is from east to west, than if he moves from north to south or vice versa. In proceeding in the first named direction the principal differences are exhibited through the requirements of the maritime climate in contradistinction to those of the continental or interior regions. For instance, the requirements of the central Mississippi valley differ materially from those of the Pacific Coast in the same east and west line, and so it is in regard to the needs of the Atlantic seaboard.

But after all there is a similarity, and we can trace a few varieties of apples from Atlantic to Pacific almost in a straight line. But reversing the direction of our line of travel, and moving from south to north, there is indeed a striking difference exhibited by a small change in latitude. The indigenous apples of the Carolinas differ markedly in characteristics from those of Virginia, and between Virginia and the east Atlantic seaboard there is another change. This variation goes on as the line of travel passes through New England and into Canada. In northern Vermont and eastern and southern Quebec there are very few varieties of apples, taking this as our class of fruit under examination, that are similar in character to those found in Virginia, for instance. But even Quebec does not mark the possible northern limit, for we have recently been evolving a fruit list from Manitoba and the North West Territories. In the Canadian Horticulturist for April there are lists from Manitoba and lists from Saskatchewan. The Manitoba list does not contain a single eastern apple with the exception of the Duchess, all of the others being Russian varieties, while the list from Saskatchewan is made up exclusively of hybrids of the wild Siberian crab, *Pyrus Baccata*. As illustrating the rapidity of apple evolution in the effort to meet the needs of northern climates, it should be noted that the list given is comprised exclusively of varieties originated for the express purpose of meeting these northern requirements, by the Canadian Experimental Farm authorities. They have been produced by crossing the berry crab (*Pyrus Baccata*) with the hardiest forms of the larger Siberian hybrid crab and the hardier varieties of Russian apples.

While there is no immediate likelihood of these northern regions becoming competitors in apple growing, yet even the insignificant crab is a prized fruit in the region where the currant and goosberry have to be protected during the winter with careful solicitude.

Fruit and Plant Notes

THE BEST LILACS

The lilac is one of the old fashioned plants which is receiving renewed attention at the hands of planters. It is coming into fashion and this is just and right for there is no shrub with greater adaptability than the lilac, none which has more desirable qualities combined in its list of good points. W. N. Craig of Massachusetts recommends the following collection which he says includes the best twelve varieties:

"For anyone wanting a 'boiled-down list,' I submit the following dozen sorts, which will bloom over a period of six weeks: *S. oblata*, *S. vulgaris*; singles, Marie Legraye, Philemon, Ludwig Späth, Gloire des Moulins, Macrostachya, Charles X, *S. vulgaris*; doubles, Mme. Lemoine, Alphonse Lavalle, Belle de Nancy, *S. Chinensis*, *S. villosa* and *S. Japonica*."

ROME BEAUTY FOR COLORADO

I cannot praise the Rome Beauty apple highly enough for Western planting, especially in our own mountainous sunny region, and on our Red Mesa soils it gets a color that is not surpassed by any apple, and even on our heavier bottom lands its color is always good in this locality.

While in Utah inspecting fruit for the Grand Junction Fruit Growers Association last summer and fall I noticed this apple especially, as it is one of my favorite sorts, and found it there doing fully as well as for size, color, etc., as our Colorado grown, but it lacked the keeping qualities that make the Colorado apples of any sort so valuable.

The Rome Beauty has many qualities that make it invaluable as a commercial sort. Among them are its coming into bearing while quite young, many fine specimens being picked from trees three years from planting; its excellent cooking and baking qualities, besides being a fine table apple. In these respects it is only equalled by Grimes' Golden and surpassed by none, as so many good table apples will not cook or bake. As for keeping qualities, I have kept Colorado grown Rome Beauties until April in an ordinary cellar and they were fine when used. Its season, however, is along Christmas time when everybody wants good apples.

It is also good from the grower's point of view. First, it is a late bloomer, thereby escaping many early frosts. Last season I had a fair crop of Rome Beauty while all other sorts were killed by frost. The apples set singly and evenly all over the tree, there being no clusters or bunches. This is a very good feature here in the West where we have to spray so thoroughly and fight so hard to keep the apples from ravages of the codling moth, and as they have a tendency to thin themselves it insures a good even crop every year, with scarcely any thinning as is necessary with so many good apples to keep them from over bearing. This also insures a crop of good even marketable size, which is very important where we are so particular as to size and grading. There is very little danger of a crop of Rome Beauty being undersized if they receive any care at all, and so a very small per cent is cull.

I would advise planting this variety in favored Rome Beauty regions by all means, as the apple is growing in favor each year here in the West and the price of it now is always equal to that of the Jonathan, Winesap, Grimes Golden, etc., so plant it extensively as there will be more call for it as its excellent qualities become known. As to planting it instead of the Missouri Pippin I would say, "Yes," as it surpasses that variety in every respect, and always sells for more money and doesn't have to be thinned so heavily to insure marketable fruit.

I would not plant it instead of Ben Davis, as the old Colorado Ben makes us as many dollars one year with another as the best of them. But I would say use the Rome Beauty as a kind of filler with any other sort as the main variety in the orchard; as the tree is of upright growth and doesn't require quite as much room as some trees good results will be obtained. If set in a solid block they can be planted a little closer than some of the more vigorous growing sorts.

Grand Jc., Colorado.

CARL K. RUPP.

PEACH DIFFICULTIES IN EAST TEXAS

The horticulturist of the Texas Agricultural College, Professor E. J. Kyle, is of the opinion that the way out of the difficulties which have been retarding peach growing in East Texas for a number of years is the breeding of stocks better adapted to climatic conditions than those which are now employed. The real trouble with Texas peach growing is that the trees are stimulated by unseasonable warm weather in mid-winter and then injured by succeeding cold waves. When the winter is uniformly cold, or normal in regard to cold, the peach crop escapes injury, but when abnormally warm trouble is sure to arise.

Professor Kyle suggests that explorations of Mexico or some other peach growing country should be made with a view of securing seedling stock which has been so acclimated to warm temperatures as to remain dormant throughout the winter period irrespective of weather conditions. The suggestion is certainly worth careful consideration because of its reasonableness, and it points out a line of work which might very well be taken up by federal and state institutions interested in fruit growing.

RECOMMEND APPLES AS CURE FOR DRUNKENNESS

A writer for the *California Fruit Grower* makes the following striking statement worthy of careful consideration:

"I am thoroughly convinced that any man who is a lover of whiskey and is in a condition when he thinks he must have a drink, if he will eat an apple before he takes the drink, he will find that his appetite for the drink has been very materially lessened, if not entirely abated for the time.

"I would like to have you, gentlemen, make careful investigation and extensive inquiry, and find, if you can, if any one ever saw in a grog shop or saloon, or in any other place where intoxicants were sold or consumed, that apples were placed in convenient place for use as a free lunch. I have never heard of such a thing. Instead of apples as a free lunch in a saloon, you find all kinds of richly spiced, salted and peppered foods—just such foods as would stimulate the appetite for intoxicants. If this use of apples can become a settled fact with the masses the field of usefulness for the apple is just beginning to open. I am a firm believer in the fact that apples and intoxicants can never go together.

GOOD WORK OF THE MISSOURI STATE BOARD OF HORTICULTURE

[Special Correspondence]

Out in Missouri the State Board of Horticulture is becoming a power for the good of fruit growing. Although young in years, this State Board has taken over the work of the old State Horticultural Society, which is no longer active, and has greatly enlarged on its activities. The Board of Horticulture was created by an act of the legislature in 1907. The State is divided into six districts, approximately equal in size, and the Governor appoints a man from each of these territories to serve on the Board for a term of four years.

The Missouri Horticultural Board from the first directed its attention to the improvement of the existing orchards rather than to the further planting of large areas. Its recommendations to prospective fruit growers have always been conservative. It advises "to plant only what you can take good care of." The Board members have always been agreed that boosting is a good thing, but that overstimulating an industry by inducing the wrong kind of people to enter it would certainly react on the State and be harmful in the end.

ORGANIZATION

The Board maintains headquarters at Columbia at the Agricultural College, a member of the Horticultural staff of the University, Dr. W. L. Howard, being the Secretary. In the first place a live list of over 3000 fruit growers of the State was made up and the Board has always kept in close touch with them. Sending out an Annual Report once a year was not enough, so now and then a bulletin was distributed or a circular letter mailed to each. Brief articles and crop reports were published in the country weeklies. From the very first every letter of inquiry was answered fully, literature sent if available, and if not citations were given as to where it could be found. The fame of the Board as a source of information and advice soon spread, and letters came pouring in from every country. This has kept up until the correspondence will now average 500 letters per month, and on the average one bulletin or pamphlet is sent out in connection with each letter. Thus one thousand pieces of mail matter go out monthly to the growers of fruit. Calls for one of the bulletins came from every state in the Union and from seven foreign countries. In addition to the above special requests, the Annual Report, one or two bulletins, and several circular letters are sent out to the entire mailing list of nearly 5000 names, annually.

The Board is endeavoring to organize the fruit growers into associations for purposes of growing and marketing fruits. Strawberry and peach associations have been very successful. Apple growers sell through one large association very largely. So far they have not seen the necessity for maintaining organizations for growing and packing purposes, but this will come soon. Members of the board go out and organize associations upon request.

Special conventions are held in various parts of the state for the special purpose of encouraging certain indus-

tries. Last fall a Strawberry Congress was held in the center of the berry district. At this meeting the discussions were confined to strawberries alone. Other similar institutes were held at other places. Once each year a big State meeting and fruit show are held in connection with the activities of Farmers' Week at the University. Last year 1400 people were in attendance.

PRESIDENT STARK, AN ACTIVE WORKER

For two years W. P. Stark, the well-known nurseryman and President of the American Association of Nurserymen, was President of the Missouri State Board of Horticulture and it was largely due to his activities that horticulture in the state took on new life. President Stark followed the policy of gathering all the latest information to be had regarding practical methods of orchard management. He sent delegates to all the prominent fruit districts of the country, and these delegates reported to the growers at the next annual meeting. Mr. Stark is a man with a wonderfully active mind, and he gave the Board work some of his best thought. At all times in office and out of office, Mr. Stark has worked for the enactment of a law providing for compulsory inspection of nurseries and orchards. The fruit growers are with him, and such a bill would have been passed by the legislature just adjourned, had there not been a political controversy in progress during the closing hours of the session, which resulted in great confusion and the loss of several meritorious measures. As it was, the inspection bill, which provided for a State Horticultural Inspector, passed the Senate unanimously and encountered no opposition in the House. Fruit growers and nurserymen of the state will not be satisfied without a law of this kind, and a united demand to this effect is sure to be made on the next legislature.

The appropriations for the State Board for the years of 1911-12 amount to \$26,000, for all purposes. Mr. Stark personally appeared before the joint appropriations committee and secured the above sum after stating the needs of the Board in order to continue the work it is doing.

COOPERATION IN THE STATE

Other men to whom much credit is due for the successful work of the Board are Mr. R. M. Hitt of Koshkonong, now president of the Board and Mr. T. H. Todd, a veteran fruit grower and former member of the Board. President Hitt is a type of the modern fruit grower. Young and vigorous and full of enthusiasm, he soon made up his mind that the growing and marketing of fruit was a complicated, exacting business, which required as much intelligent thought as a mercantile or banking business. He is one of the large peach growers in the famous Koshkonong district of southern Missouri, where they never have an entire failure of crop. Last year Mr. Hitt employed the latest methods in handling his trees to prevent the rotting of the fruit, with the result that he marketed ninety-five per cent of a full crop, while the owner of a 200-acre orchard adjoining refused to break away from old practices, and marketed only five per cent of a crop.

Our Book Table

A Manual on the Production and Cultivation of the Peony.

By C. S. Harrison.

This monograph of 64 pages, written in popular vein and nicely illustrated, places before the eye of the reader, in an impressive form, the leading points of merit of this old but until recently practically unappreciated flower. Mr. Harrison has been a peony enthusiast for a number of years. In his Nebraska home he finds that this is one of the plants which winters and summers and blooms on time, notwithstanding western winds, droughts, and cold winters. In addition to eulogizing the peony and describing the leading varieties, Mr. Harrison has added a chapter on perennial flowers which is timely and useful.

THE OLD FARMER AND HIS ALMANAC. George Lyman Kittredge. 400 pages, illustrated. Publishers, Wm. Ware & Co., Boston.

This is an exceedingly interesting story of New England life. The skeleton of the series of sketches is furnished by the early numbers of the Farmer's Almanac, first published in 1792 by Robert B. Thomas. This almanac began in a small and unpretentious way, and continued for more than a century. The author addressed himself to the men of his own time, and, as was the habit of almanacs of that period, dabbled in matters very much aside from pure meteorological records or conditions. Thomas was not a genius like Franklin, but he was a keenly intellectual man, alert, and anxious to further the well being of his fellow men in every manner possible. The book is essentially a miscellany. Nevertheless, in these disconnected chapters and paragraphs there is much of suggestion and value to the 20th century citizen. The author well says the minor antiquities are not to be despised. They have their actual value and their suggestive importance. The author has taken the topics suggested by the almanac, and has developed these by having recourse to the older New England writers, and to the printed observations of foreign travellers in America, of which there were not a few after the War of the Independence. The following is the unique title page of this almanac for the year 1795:

"The Farmer's Almanac, calculated on a new and improved plan for the year of our Lord, 1795, being the third after Leap Year, and nineteenth of the Independence of America, fitted for the town of Boston, but will serve for any of the adjoining states, containing besides a large number of astronomical calculations, and farmer's calendar for every month in the year, and as great a variety as any other almanac of new and entertaining matter."

Robert B. Thomas, the author of the almanac, has the following to say on agricultural matters. It shows perspicacity coupled with modesty.

"My precepts and observations on agriculture, I have the vanity to believe, have been approved of by farmers in general. Agriculture forms an ample field in this country for the ingenious to expatiate upon, in which improvements are making every day; and as my greatest ambition

is to make myself useful in this way, 'tis my sincere wish that men of experience and observation in agriculture would be kind enough to forward me such hints towards improvement, as are capable of being rendered serviceable and of general utility to the public."

The volume is attractively printed, interestingly illustrated, and can be confidently commended to all those who are interested in the folk lore and traditional aspects of country living.

RURAL HYGIENE, by Henry N. Ogden. 5 x 7½. 434 pages including index. Illustrated. Published by The MacMillan Company, New York, 1911. Price, \$1.50.

Indicative of the rapidly expanding interests in affairs relating to life in the open country, yet of prime value to the farmer and owner of country home, is the question of sanitation. This subject is old and a thoroughly considered one to the resident of the city and the larger town but, curiously enough, very small attention has been paid to the matter of providing against unsanitary arrangement of dwelling and outbuildings in the farm compound. Yet in conditions of this kind, the need for precautions making for safe and healthy living, while not so immediately apparent and pressing, yet becomes even more acute in the country than the city, as the establishment takes on age. This argument is strongly supported when we realize that cities are under continuous supervision of health officers, while homes in the country are considered healthy until proved otherwise by the appearance of disease. The volume on rural hygiene mentioned below is therefore very timely, but more than that, should be in much demand. It is the outgrowth of a course in sanitary science established in Cornell University, of which the author has been the director.

This book is presented as one of the Rural Science Series, edited by Dean L. H. Bailey of the New York State College of Agriculture. So wide is its scope, and so varied are the subjects it discusses, though they all relate in some way to hygiene, that there can be no question of its great importance. One would probably have to consult a large number of publications in order to find elsewhere the same sort of valuable information which is here brought together in one volume. Moreover, the subject matter is expressed so interestingly that it is far from being an unpleasant task to learn from this book, and the facts presented are in most cases equally applicable to city residents and to country dwellers. The first part of the book deals with drainage, ventilation, and water supply matters, proper attention to which is of vital importance to the health of a community or a family. Seven chapters in the last half of the book are devoted to personal hygiene, and besides giving causes and methods of prevention or treatment of a number of diseases, the author corrects many erroneous ideas in regard to these maladies.

A course in sanitary science was established four years ago at Cornell University which bids fair to develop into a school.

Quiz Column

EDITOR NATIONAL NURSERYMAN:

SWEET POTATO PLANTER

I need a machine operated by horse power that will set out sweet potato slips.

Please let me have full information at once if you know anything about such a machine. I thank you.

Respectfully,

Texas.

R. C. Dycus.

ANSWER BY HORACE ROBERTS, NEW JERSEY

I have had Barton Brothers, of Marlton, N. J., plant my sweet potato plants with their plant setter. It opens the furrow, makes the row, waters the plant, and presses it tight. Two little boys sit on behind to put the plants in place. It does especially well on large plants. They use the same machine for strawberries, tomatoes, cabbages, etc. There are hand machines for putting in sweet potatoes in South Jersey. With one of these a man will put in plants as fast as two boys will drop them. For further information I would refer thee to Barton Bros., Marlton, N. J.

STORAGE CELLARS

One question I would like to ask: Would you consider it advisable to construct a storage cellar of hollow terra cotta tile? Have any nurserymen used this material so far as you know, and, if so, with what results?

Yours truly,

C. W. ATWATER.

ANSWERS

There is no doubt that the hollow tile type of building material plastered inside and out would give you a very satisfactory form of construction for a storage cellar in Connecticut. The architect would undoubtedly look to the necessary reenforcing of this form of wall. Whether the hollow tile would be preferable to concrete construction is a matter which you would have to settle on the basis of expense. The concrete form is probably more durable, and should in every other way be just as efficient as tile. It is probable that the concrete is in more general favor, and the more universally used of the two types. Messrs. Chase Brothers Company of Rochester have an excellent concrete storehouse, and could probably give you valuable information on the expense of this type of construction.

EDITOR.

NATIONAL NURSERYMAN:

Enclosed please find check for subscription to the NATIONAL NURSERYMAN.

We are having a fine trade and could not do without your valuable paper.

Ohio.

Yours for success,

WEST BROS.

NATIONAL NURSERYMAN:

Enclosed please find \$1.00 for renewal to your excellent journal. With best wishes for your prosperity.

Texas

W. A. YATES.

AN EXPERIENCE WITH PEACH ROOT GALL

There is no desire to express an opinion about the manner in which root knot on peach is extended. In Kentucky we are practically exempt and prior to 1885 or thereabouts I had never seen one. About that time the Southern peach industry sprang up and buds of five varieties originating there were secured from a southern nurseryman of the highest standing, wishing to prove their value there. The buds looked well and made fine growth. We were surprised to find quite a number afflicted with this knot.

These trees did well in a trial orchard. In subsequent propagations they reoccurred, but in decreasing proportion. There was no tendency to spread to kinds immune. In the course of time these also became immune. In 1902 our peaches were planted on ground previously occupied for some years by red and black raspberries, both being somewhat afflicted with root knot. That crop of trees was the poorest ever, both in growth and prevalence of root knot. It is needless to say that such land was never again used for anything predisposed to this affliction.

There is no wish to formulate a theory but only to marshal the facts. The southern buds had within themselves the germs of root knot. If the virus were in the wood why did it not extend to the entire system, the seed of course included? Mr. Hood is right in the opinion that pits from trees affected continue the affliction. It is clear that the germ of this parasitic growth may be contained in the seed, just as it is in the scion. It also seems that it may pass from one host to another, not by direct inoculation or inherency but by soil contact making three ways of contamination. Our ability to get rid of this trouble by the use of clean good land and use of virile seed and scions, in so far as they may be so adjudged, demonstrates that it is up to nurserymen to keep an eye picked on these three propositions. May it also be added that we have more abiding faith in the quality of the land than anything else, for the reason that in the animal world good feed and care give immunity and ability to shake off many of those pestilent things that are parasites on the weaklings and starvelings of both kingdoms of life.

Respectfully yours,

H. F. HILLENMEYER.

THE SAMUEL C. MOON NURSERY

MORRISVILLE, PA. The recent demise of Samuel C. Moon will, it is understood, lead to the breaking up of the business so long conducted by that gentleman. The nursery will hereafter be conducted under the same title as before, with Wm. M. McClosky, agent, in charge, and it is Mr. McClosky's intention to close out the entire business by or before June 30, 1913. This nursery, which was established in 1848, contains many rare specimens and choicest trees and shrubs not found elsewhere, and it is hoped its numerous customers of the past, as well as others, may avail themselves of this closing out opportunity to obtain some bargains in ornamental nursery stock.—*Florists' Exchange*.

Advertising is the lubricant that makes business run swiftly and without friction. A trial will convince the most pronounced skeptic.

Business Movements

The Morris Nursery Company, of West Chester, Pennsylvania, who recently lost a packing shed by fire, are erecting a two-story building on its site, which will be 36 x 80 feet.

INCORPORATED

The Greenville Nursery Co. has recently been incorporated with a capital of \$10,000, at Greenville, South Carolina. The officers are Greenville citizens: John H. O'Neal, president; W. S. Bradley, vice-president; J. B. Bruce, treasurer; J. J. McSwain, secretary. Mr. W. P. Wilson, the general manager, is an experienced nurseryman from Knoxville, Tennessee.

NORTHWESTERN APPLE SELLING AGENCY

The adjourned meeting at Walla Walla, Washington, of the apple growers who had previously met to discuss the question of forming an apple marketing agency resulted in the organization of such an agency, and the formulation of plans for its operation. This central agency will have the exclusive selling of all products controlled by the district associations which are connected with it, the charge not to exceed ten cents a box for apples.

The last report from Mr. J. McHutchison of McHutchison & Company, Importers, 17 Murray Street, New York, found him at Trinidad, B. W. I., on March 30.

Mr. J. Dykhuis of Felix & Dykhuis, Boskoop, Holland, is making his annual business tour of the United States and Canada. He arrived in New York on the S. S. Rijndam April 17, and is now calling upon nurserymen in the country. Among the novelties which he is pushing are new roses, hydrangeas, rhododendrons, and conifers.

MONTANA SHIPPING REGULATIONS

E D. NATIONAL NURSERYMAN:

The prime object of Montana Nurserymen in forming a state organization is to work for the repeal of several obnoxious features of our present horticultural law which might fairly be entitled "An Act to Discourage the Growing of Trees and Retard the Development of the Nursery Business in Montana." Here are some of the provisions of the law and rules of the State Board of Horticulture to which nurserymen object:

Nursery stock shipped into the state "shall be unpacked from the boxes or bales and examined" at certain points designated as quarantine stations, though these quarantine stations are in many cases hundreds of miles from the destination of the shipments.

Stock found infected with Crown Gall or Woolly Aphis "shall be destroyed by burning" and, if five per cent of a shipment is so affected, the whole is to be destroyed.

Nurseries are required to give the Secretary of the State Board of Horticulture five days' notice before they may

take stock from the nursery rows and pack it for delivery, and a nurseryman is required "to notify the Secretary of the State Board of Horticulture of his intention to ship an invoice of fruit trees, plants or nursery stock * * at least five days before the day of shipment."

Goods may be passed by one inspector and after delivery to the customer, condemned by another inspector.

The owner of nursery stock has no appeal from the decision of any inspector and may not even require the return of trees condemned for Root Gall, or any other so called "infectious disease."

It has been said that when a doctor makes a mistake he buries it; when our Montana inspector makes a mistake he burns it, and the victim of his mistake has no recourse, for the inspector is responsible to no man.

D. J. TIGHE, Secretary.

A WESTERN NURSERY IN THE MAKING

EDITOR NATIONAL NURSERYMAN:

The Olympic Nature Nursery is the only one of its kind in the Pacific Northwest. It is a logged-off forest conservatory, comprising five forty-acre tracts of land, touching salt water, and rising to the shot-clay upland. The area has been logged three times, in the last thirty years, and then burned over by forest fires. The last crop of timber, harvested two years ago, sold for \$7,500, and, beneath the young trees, and around the stumps and logs, were left millions of native plants.

One year ago I left the city editorial desk, resigned several public offices, and decided to go back-to-the-land. The first months were spent in clearing land, building houses, and making garden. Then came the forest fires, that swept over about 150 acres of my nursery, destroying plants, shrubs, and timber worth at least \$10,000, and burning within 100 feet of the dwelling house. One forty-acre tract was a mass of rich rhododendron flowers in June, and a wreck of burnt logs and black stumps in July.

Being Chairman of the Washington Conservation Commission, and first President of the Washington Logged-off Land Association, and an enthusiast in nature-study, I felt the loss more than many others; but an unknown friend suggested asking conservation people to give me a benefit. To this I replied: "No. Sympathy is a good act, charity a humane deed, and friendship a necessity. But, the word I need to help me now is business. Let me have orders for plants, flowers, and trees and I will appreciate the assistance of conservationists and all nature-lovers."

My plants are taken from the burned-over districts of years ago, insuring good stocky specimens, with fine roots. They are lifted by a long steel bar, made in wedge shape, without disturbing the growing system, and the roots are immediately packed in wet moss, to retain soil and moisture. Then the specimens are labeled, the moss packing covered with wax paper, or newspapers, and the package wrapped in stout mailing paper. In that condition the mail order plants leave me and are sent to every patron, with the guarantee of perfect satisfaction or money refunded.

To nurserymen I am prepared to offer exceptional, bargains in the collecting and shipping of all native plants including rhododendrons, madronas, huckleberries, ferns, evergreens, blackberries, salmonberries, Oregon grapes, alders, maples, and many other trees, plants, and flowers native to the forests of the Puget Sound country.

Nellita, Washington.

JOEL SHOMAKER.

RETURNS FROM A NEBRASKA FRUIT FARM

Some days ago, C. G. Marshall, Secretary of our State Horticultural Society, sent out a circular letter to the orchardists of the state, containing a series of questions regarding methods, experience and results. Perhaps the following paragraph which is in answer to one of these questions, may be of general interest to the public.

"This evening, I find myself able to state that sales of our fruit crop are between \$11,000 and \$12,000, fruit not yet all sold.

Expense account \$6,038.25. I may say that this expense account covers the expense of the whole farm of 240 acres, as all labor thereon is paid by checks, makes no account of the other 160 acres, devoted to timber, pasture, alfalfa and nursery stock, but the entire expense of handling the 240 acre property as a whole is charged in the expense account paid by checks of \$6,038.25.

The showing for the orchard, therefore, should be better than the figures above, in case the expense account of the orchard could be kept by itself. The approximate margin on the season's orchard crop from December 1, 1908, to December 6, 1909, is \$5500.00. It should be noted that this included the expense of hauling in a large amount of manure and straw last winter, the beneficial effects of which will be coming back from 6 to 8 years.

You will note that \$5500 pays 27 per cent interest on a valuation of \$20,000 or \$250 per acre for 80 acres of orchard. It should also be noted that two of the raspberry and blackberry plantations of perhaps four acres have just been planted and are not yet in bearing, and the entire orchard also not yet in full bearing the past season. I judge that the crop of apples, grapes and blackberries above mentioned, were raised on perhaps 60 to 65 acres.

This crop has been developed not as an accidental yield, but by the use of power spraying machinery for 20 years, free use of stable manure and straw mulching of the rows, persistent cultivation, regular pruning. The orchard is apparently in condition to give many profitable crops.

The tract, as a whole, is best suited to use as a fruit and dairy farm. Some day there will be some timber to cut. There is quite a lot of alfalfa on a fair portion of the tract, giving us more than we can use for farm and nursery teams and serving as a desirable rotation in the growing of nursery stock.

Crete, Neb.

E. F. STEPHENS.

FRUIT FORECASTS

Havoc was wrought in Georgia by the freeze of March 14 and 15. Estimates of the damage to the peach crop of the state by cold during the past winter run as high as

ninety per cent, and it is said that not 500 cars of this fruit will be shipped from Georgia the coming season.

From different parts of New York State come encouraging reports. Peach and apple orchardists say that their trees are in good condition after a favorable winter, the extremes of weather not having been very great in either direction.

The California English walnut crop is estimated at 9000 tons, slightly smaller than last year. While the fruit crop as a whole will be about two weeks late in California, it will be larger than for years.

But a small crop of peaches is promised about Tyler, Texas. Nurseries in the vicinity of Houston lost a large per cent of their Satsuma orange stock from cold the past winter.

It has been reported that the condition of peach trees in some sections of Virginia is better in every particular than last year.

From present indications heavy thinning will be necessary in connection with the Colorado fruit crop.

Reports from a large number of states indicate the probability of a short peach crop.

THE IMPORTANCE OF THE SUBJECT OF VEGETABLE GARDENING IN THE COLLEGE CURRICULUM

PROF. L. C. CORBETT

The first point Mr. Corbett made was that students studying vegetable gardening should first equip themselves with a sound knowledge of botany; systematic botany especially was very important. Particularly was it important for all investigators or teachers to found themselves thoroughly in this science before taking up field or class work. Professor Corbett drew attention to the somewhat anomalous condition of the departments of vegetable gardening and pomology in the colleges of agriculture of the country. He pointed out that there were practically two courses offered in pomology for each course offered in vegetable or market gardening. He explained this on the ground that fruit growing is a life long enterprise, that is to say, when the orchard is established it goes on more or less perennially. Again, orcharding is fostered and promoted by nurserymen. It is to their interest to push it. Professor Corbett pointed out that the fruit business of the United States, including not only deciduous fruits, but the citrus and subtropical fruits, represents only about half the wealth annually produced by the vegetable industry of this country. The miscellaneous vegetable crops produce wealth equal to that secured from the fruit interests of the country, and when the potato crop is added to this, an income twice as great as that of the fruit business is secured. When we consider this, the anomalous position of vegetable culture pedagogically considered becomes all the more apparent.

The writer pointed out that at the present time "there is a widespread and very aggressive movement toward the organization of the vegetable gardening interests of the country. The demand for fresh vegetables at all seasons of the year has greatly stimulated interest in this field of

activity, which has always been a remunerative one; but it is only within recent times that the gardens of the North have been in any way brought into competition with the truck farms of the South. Again, as the industry has grown, difficulties similar to those experienced by fruit growers with insect enemies and fungous diseases have forced themselves upon the vegetable growers, and they, too, are asking for information and assistance to protect their crops, all of which tends to make it easier to effect organization which will bring about a better understanding and a more rapid development in this much neglected field."

"In conclusion, I wish to urge that we as horticulturists neglect no opportunity to strengthen our educational institutions along botanical lines and that we encourage every institution offering instruction in horticulture to as rapidly as possible segregate their work in horticulture, so as to give the work of instruction in vegetable gardening the recognition that its commercial importance justifies."

A LONG-KEEPING ORANGE

The Ad Interim Committee on Wilder Medals of the American Pomological Society has awarded a silver medal to a new variety of orange, known as the Lue Gim Gong. This variety has the following history:

ORIGIN.—In 1888, Mr. Lue Gim Gong, De Land, Fla., pollinated Harts Late with pollen from what was believed to be a Mediterranean Sweet tree. One orange containing fifteen to eighteen seeds resulted from the crossing. From these seeds about twelve trees were raised, no two of which proved to be alike.

The variety, now called Lue Gim Gong, when it came into fruit seemed to be such an improvement on Harts Late that Mr. Lue budded fifteen trees with this variety in one side and Harts Late (Tardiff) on the other. About thirty other trees were budded with this variety on one side and other varieties on the other. Five trees are now solid.

COMPARISONS.—At this time, Harts Late is the standard late orange of Florida and it may therefore be well to make comparisons between this new variety and the standard sort. On July 6th, 1909, Mr. Lue took fifteen boxes of Harts Late (from one side of above trees) to the packing house and after testing for Sp. Gr. by placing in water, packed five boxes out of the fifteen. These were considered to have enough weight for shipping. Those five boxes were shipped to North Adams, Mass. Upon arrival they had to be repacked at a cost of 35 cents per box and then only three boxes remained. The three boxes repacked sold for \$2.50 per box.

At the same time five boxes were picked of the Lue Gim Gong orange from the other side of the same trees. The fruit was not tested for Sp. Gr. and all the fruit was shipped. On arrival at North Adams they did not require repacking and the whole five boxes brought \$4.50 per box.

The Lue Gim Gong orange is a hardy, thrifty growing variety. It can be marketed to advantage in August and September when other varieties are out of season, and when the only fruit on the markets is Valencia Late from California.

The fruit hangs on the trees with very little dropping through the rainy season which in Florida usually begins in June and lasts several weeks. The fruit has been known to hang on the trees, two, three and even four years in an edible state. There is no question but that this variety marks the beginning of a new era in late orange culture.

The report of the committee is as follows:

GENERAL APPEARANCE.—Good on fruit of this season. Two year olds a little coarser in peel, but still good. Three year old fruit thicker peel and darker in color.

SIZE.—3 1/4 inches from calyx to blossom end and 3 1/8 in diameter.

FORM.—Good. Somewhat cylindrical with well rounded ends.

COLOR.—A little light in midseason, darkening to a rich deep reddish-yellow later in spring and summer.

MARKET VALUE.—Very promising.

SHIPPING QUALITY.—Most excellent.

KEEPING QUALITY.—Of the best. Its most marked quality.

DESSERT VALUE.—Good.

TEXTURE.—Firm with strong tissues.

FLAVOR.—Sprightly, a rich blend of sweetness and sub-acid.

QUALITY.—Good.

SPECIAL MERIT NOTICED.—Holding its juice while on the tree for thirty months, and its remarkable resistance to cold.

DEFECTS NOTICED.—Membranes strong, as in all late oranges.

PRODUCTIVENESS.—Prolific even when loaded with previous season's crop.

HARDINESS.—Very hardy.

RESISTANCE TO DISEASE.—Good.

RECOMMENDATION.—Worthy of wide trial for planting on a large scale for a year around orange.

G. L. TABER,

W. S. HART,

G. B. BRACKETT,

Committee.

A full description and history of this variety appears in the Report of the American Pomological Society covering the proceedings of the Florida meeting. This variety is unique in its keeping qualities. The writer within a few weeks has examined specimens of the fruitage of 1908, and found them in edible condition. These had clung to the tree since that time. They had become somewhat overgrown and slightly rough, and had lost a good deal of the juice, but were not vastly inferior to many of the store oranges we are accustomed to pay thirty or forty cents a dozen for. The variety is being introduced by the Glen Saint Mary Nurseries of Glen Saint Mary, Florida.

JOHN CRAIG,

Secretary American Pomological Society

CONDITIONS IN GEORGIA

The drouth which prevailed during February and March has at last been broken. Spring planting has been necessarily retarded, as the ground was so dry that it was impossible to do any planting during the months of February and March. The deficiency of rainfall in the Augusta district for the past thirty months is twenty-four inches. Notwithstanding the drouth of the past two months, the demand for nursery stock has been very heavy and we have had all the orders we could handle.

The peach crop in Georgia this year will not be a bumper. The warm weather in early February forced the trees into

bloom earlier than usual. During March we had several freezes, and in consequence the peach crop is badly injured in certain sections, but to what extent it is, at this date, impossible to estimate. However, from reports received to date from different sections of the State we think that the crop will be reduced fully sixty-five per cent.

Generally, Elbertas, which produced a heavy crop last year, had very little bloom this year, and in consequence the crop of Elbertas will be very light. In Berckmans Brothers' orchard, Mayfield, Ga., we have a full crop of Belle, Carman, and Thurber. The bloom of other varieties was very heavy, but these sorts were situated in lower ground where the frost did the most damage, consequently the crop of same will be very light.

Many fruit growers who have not cared for their orchards are cutting out same, but the progressive and up-to-date orchardist is giving better attention to his orchard than ever before. It is now a case of a "survival of the fittest." Generally throughout the entire State, the system of cultivation of all farm crops is decidedly improved.

P. J. BERCKMANS CO.

POSITIVE HOT WATER CIRCULATION IN GREENHOUSES

CARL S. DOW

The gravity of the heating question in greenhouses has naturally given rise to many expedients for insuring a proper temperature in all parts of the ranges; both steam and hot water heating have been used to a large extent for greenhouse heating, and while both have many advantages, neither has proven entirely satisfactory. Hot water as a heating medium is undoubtedly superior to steam if a proper circulation can be maintained, and a device is now obtainable which makes hot water circulation positive.

The Castle circulator which is manufactured by the American Auxiliary Heating Co. of Boston, Mass., overcomes what is practically the only objection to hot water heating—its sluggishness. With the help of this invention the circulation of hot water is placed upon a mechanical basis—the difference in temperature between the supply and return sides of the system no longer govern the speed with which the radiating surface is warmed.

What this means is evident to any florist who has worried through a cold winter with no positive assurance that his plants will not be frozen in sudden cold snaps. The necessity of piling on coal, an uneconomical proceeding at best, is done away with by this simple apparatus which can be set at work merely by turning on the current. It consists of a small propeller set in the branch pipe and operated either directly or through a small belt by an electric motor.

When the temperature in any part of the range shows a tendency to fall, it is only necessary to turn a switch and start up the motor to get immediate and positive circulation of heat throughout the greenhouses. An automatic valve shuts off the branch pipe in which the propeller is located when its services are not needed. As soon, however, as the

circulator is started up, this valve changes position and shuts off the gravity flow of the system. No attention need be paid this valve, as its action follows at once upon that of the circulator. The extreme simplicity of this system recommends it hardly less than its efficiency. Not only is heat circulated with absolute certainty but the amount of coal burned is materially reduced. This has been proven conclusively in many installations. One florist reports that his coal consumption has dropped from 99 tons to 73 tons since the installation of the Castle circulator in his greenhouse. Another florist who has 100,000 square feet under glass claims a saving of one-third of his fuel bill. How these economies are accomplished will be evident from a little thought of the principles underlying this device.

With the ordinary system of gravity hot water heating, circulation is dependent solely upon the difference in temperature between the two sides of the system. In order to get quick circulation there must be a large difference in temperature, which means cold returns. In such a case a large amount of coal is necessary to heat up these cold returns to the temperature desired for the supply lines. The Castle circulator obtains much more rapid circulation with a drop in temperature of only a few degrees, thus obviating the necessity of running heavy fires to heat up the cold returns, while at the same time the radiating surfaces are kept up to a high temperature and thus rendered very efficient.

MAKING IT EASY FOR ALASKAN FARMERS

Governor Clark, of Alaska, who is a plain newspaper man when he isn't governing, and a very shrewd one, said that farming would some day be Alaska's chief industry. That was a large order, and it made a lot of people who have never been to Alaska smile scornfully. They forgot that Governor Clark was a newspaper man and that he knows Alaska a great deal better than most New Yorkers know their state, for instance, or than most Coloradans know theirs. They also forgot that if the same thing had been said of Colorado, or California, or Idaho, or Oregon a few years ago, they would have smiled just the same and would have been quite as wrong.

Uncle Sam has been notoriously remiss in the care of the baby empire he is bringing up on the fresh air plan up north there, but there is one thing he has done. He has proved beyond the shadow of a doubt that Alaska is no more unsuited to farming than Norway and Sweden, which is another way of saying that Governor Clark's pronouncement has been officially confirmed by the department of Agriculture, the Department of the Interior, Congress, and various individual officials.

Moreover, "something is being done about it". In this respect at least, Uncle Sam is taking care of his baby. He is doing all that can reasonably be expected of so self-absorbed a parent to make a farmer of the youth, and the child is responding well.

For several years Uncle Sam has maintained five experiment stations in Northland. That was not a great many, but it was enough to make many important and hopeful discoveries and to start real farming. Then he doubled his inducements to settlers, by making the Alaskan homestead 320 acres instead of 160, as it is in "the States". This still left it necessary however, for the Alaskan settler to pay the cost of a survey before he could secure title, and a survey in Alaska was often an expensive thing. Now this obstacle is being rapidly overcome. Congress made an appropriation in 1910 to cover the cost of a government survey of the chief farming areas that would first be occupied. This work was put in charge

of the Geological Survey and the first part was done last summer. A basis has now been established that makes it needless for farmers taking up land in Alaska to bear the cost of the survey. They have, in fact, virtually no expense except getting to the place they want to occupy.

Note and Comment

Numerous homesteads have already been taken up in the territory, notably in the Tanana valley of the Interior, in the new Kotsina-Chitina country recently penetrated by the Copper River and Northwestern Railway, around Seward and in the Susitna basin. There are four well-developed farms near Seward, several around Knik on Cook Inlet and any number in various parts of the interior. They are making money, too, wherever they are near local markets not too available to Seattle. Around Fairbanks, for instance, the only competition that homegrown oats and potatoes must meet is produce shipped by rail to Seattle, then carried on a 2,000-mile sea voyage and transferred to river steamers that must haul it up-stream another thousand miles. The cost of all this haul makes a protective tariff in favor of the local farmer that even the Aldrich bill cannot equal. Compared with gold mining, even as it is in Alaska, these northern farmers have been doing almost as well in a surer, easier way.

Moreover, there is room for a great many more. A mining camp will absorb many hundreds of tons of supplies in a year, a large part of which can be grown locally, and there are many mining camps. One article for which there is always a demand is oats. The heavy work of the trails make hearty feeding of pack horses necessary, and oats are everywhere at a premium. Yet they can be easily and successfully matured in a score of valleys of the territory.

The suitability of Alaska for stock raising has been amply proven, and this, it is predicted, will play a large part in its future fame. Yet this industry is only just begun. We may not have enterprise enough to go and pioneer ourselves, but we may well watch with interest the progress of this most important development.

OUR FRIENDS THE BIRDS

Not only are birds of value as insect destroyers, but many feed largely on weed seeds. Among the seed-eaters may be mentioned the doves, finches, sparrows, bobolinks, quail and blackbirds. From examination of many stomachs, it has been found that during the winter sparrows live almost entirely on weed seeds. Assuming that a sparrow eats one-fourth of an ounce per day, and counting only twenty birds to the square mile, it can readily be seen that they dispose of enormous quantities of seed in the course of a year.—*The Nut-Grower.*

HARTFORD, CONN., March 17. J. H. Hale, the peach grower of South Glastonbury, has been appointed a member of the state railroad commission by the governor.—*New York Packer.*

Catalogues Received

Diggs & Beadles, 1709 E. Franklin St., Richmond, Va. Catalogue of superior seeds for 1911.

The Good & Reese Co., Springfield, Ohio. Catalogue of ornamentals. Roses a specialty.

Huntsville Wholesale Nurseries, Huntsville, Ala. Bulletin No. 3 of surplus stock, March 15, 1911. Bulletin No. 4, March 22, 1911. Bulletin No. 5, March 28, 1911. Bulletin No. 6, April 4, 1911. Bulletin No. 7, April 11, 1911. Bulletin No. 8, April 18, 1911.

Vreeland Chemical Co., 50 Church St., New York City. Descriptive circulars of Electro arsenate of lead, and lime-sulphur.

The "New-Way" Motor Company, Lansing, Michigan. Catalogue of power sprayers.

J. T. Swan, Auburn, Nebr. Card describing Swan's apple pickers' jacket.

F. W. Watt Lime Co., Glens Falls, N. Y. Pamphlet advertising Jointa Lime.

J. Woodward Manning, Reading, Mass. "Landscape Planting for Pleasure and Profit."

H. G. Hastings & Co., Atlanta, Ga. Catalogue No. 41, spring, 1911. Also "Southern Hay and Forage Crops."

Finca "Mulgoba" Nursery for Tropical Fruit Trees, H. A. Van Hermann, Mgr., Santiago de las Vegas, Cuba. First annual catalog.

Mount Arbor Nurseries, Shenandoah, Iowa. Bulletin No. 2, March 27, 1911.

Fraser Nursery Company, Huntsville, Ala. Box lots in cold storage and surplus, April 1st, 1911.

The Palisades Nurseries, Sparkill, N. Y. "Palisades Popular Perennials."

The Goulds Manufacturing Co., 58 Pearl St., Boston, Mass. "Water Supply for the Home."

Knight & Bostwick, Newark, N. Y. Special post card of surplus stock.

The William H. Moon Company, Morrisville, Pa. "Privet for Hedges," with special prices on privet hedges.

The H. L. Frost & Bartlett Co., 315 Atlantic St., Stamford, Conn. "Apparatus and Equipment Used in the Care of Trees."

Sam. H. James, Mound, La. Post Card regarding pecans.

Westbury Nurseries, Isaac Hicks & Sons, Westbury, N. Y. Trees for Long Island. Stock list, March, 1911.

Sherman Nursery Co., Charles City, Iowa. Surplus list, April 3d

The Conrad & Jones Co., West Grove, Penna. Roses, cannas, shrubs, etc.

Jackson & Perkins Company, Newark, N. Y. Last spring bulletin.

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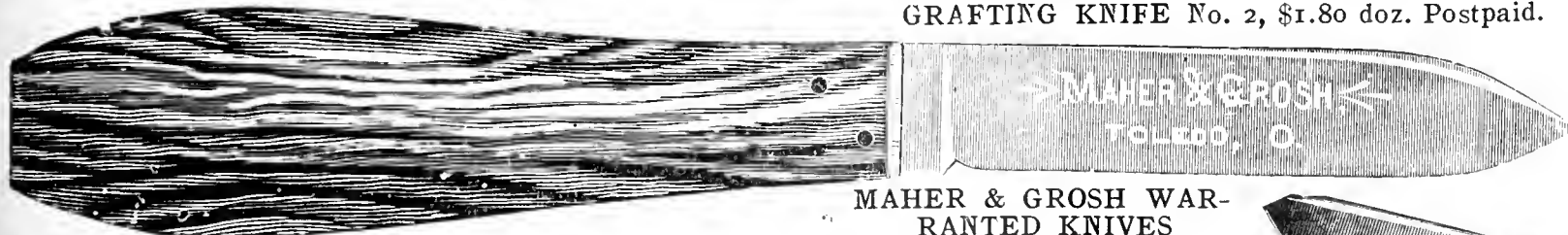
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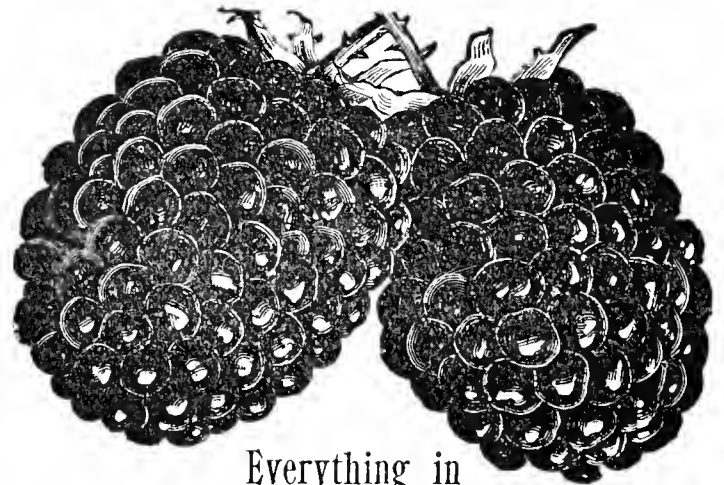
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lopsi, Aristolochia, Azalea, Buxus, Clematis, Dielytra,
Funkia, Hydrangea, Kalmia, Magnolia, Paeonia, Phlox,
Rhododendron, Roses, Standard Roses, Conifers, Tulips, Hya-
cinths, Narcissus, Crocus, Palms, Bay Trees.

Catalogue on application to our Mr. C. Grootendorst,
care of Messrs. P. C. Knyper & Co., 10-12 Broadway, New
York.

YOUNGERS & CO. GENEVA, NEB

FOR LOW PRICES ON

CHERRY APPLE PEACH
PEAR EUROPEAN PLUM

GOOD SUPPLY OF

Grape Vines Gooseberry Currants
Shade and Ornamental Trees
SEEDLINGS

We have a large stock of MAPLE, ELM, OSAGE and
HONEY LOCUST. Write for prices.



Small Fruit Plants for the Nursery Trade, Spring 1911

Black and Purple Raspberry Tips, Red Raspberry, Blackberry, Dewberry,
Strawberry, Gooseberry Layer Plants, 1 and 2 years Layered, Orange Quince,
Gooseberry and Currant Cuttings, Asparagus, 1 and 2 year old, Horseradish.
Rhubarb 1 and 2 year old Roots, also divided Roots. Write for prices.

P. D. BERRY, Dayton, Ohio

FOR FALL 1910

We have the largest and most complete assortment of Ornamental Trees, Shrubs and Herbaceous Plants we have ever grown. Also Tree Seedlings in large variety.

We have genuine Catalpa Speciosa and Black Locust in large quantities. You cannot afford to buy before getting our quotation, it will pay you.

Are now ready to quote you.

The Willadean Nurseries
SPARTA, KENTUCKY.



THE UNITED STATES NURSERY COMPANY,
ROSEACRES, Coahoma Co., MISSISSIPPI

We have a splendid stock of

Grape Vines

and other small fruit plants for the Nursery trade, graded up to the highest standard and sure to please you.

Give us a trial order, send in your list now for quotations.

WILLETT & WHELOCK
North Collins, N. Y.

PEACH BUDS

==FOR JUNE BUDDING==

TWENTY-FIVE
LEADING VARIETIES

ASK FOR LIST

**The Greenbrier Nursery
Company, Inc.,** Greenbrier,
Tennessee

DREER'S

QUARTERLY WHOLESALE LIST

offers a full and complete line of

Hardy Perennials, Hardy and Tender Aquatics, Nymphaeas, Nelumbiums, Victorias, etc.

Hardy Shrubs and Climbers, Rhododendrons, Hardy Azaleas.

Strong Two-year old Roses in Pots, new and standard varieties. A large stock of Hybrid Teas, the most select and complete list offered to the American trade.

An immense stock of Decorative Plants, including Palms, Ferns, Araucarias, Pandanus, Ficus, etc., Flower and Vegetable Seeds of all kinds.

If you are in the Trade and do not receive a copy write for it.

HENRY A. DREER, Philadelphia

35TH YEAR

Pan Handle Nurseries

WE OFFER A COMPLETE ASSORTMENT OF NURSERY STOCK CONSISTING OF

Apple	Poplar Carolina	Ampelopsis
Pear	Poplar Volga	Roses
Plum	Elm American	Evergreens
Cherry	Sycamores	California Privet
Peach	Mountain Ash	Buxus
Grape	Althea	Weeping Trees
Currant	Hydrangea	Catalpa Seedlings
Gooseberry	Barberries	Black Locust
Small Fruits	Syringeas	Fruit Tree
Maple Norway	Clematis	Catalpa Speciosa Seed.
Maple Schwedlers	Honey Suckle	Etc., Etc., Etc.
Maple Silver	Wistaria	

Our stock is well grown and graded. Prices are such that it will pay to investigate. Come and see us or write.

J. K. HENBY & SON
GREENFIELD, IND.

J. H. SKINNER & CO.

Station "A," Topeka, Kansas.

Fruit, Shade and Ornamental Trees

∴ FLOWERING SHRUBS ∴
APPLE AND PEAR SEEDLING
∴ FOREST TREE SEEDLING ∴

For Fall 1910

We wish to Call Attention to Our Offerings of

PEACH—One Year and June Buds. We invite inquiries NOW from buyers of June Budded peach, plum and apricot. We will bud especially to suit YOUR particular wants.

PLUM—De Soto, Wyant and Japanese varieties

PEAR, CHERRY AND QUINCE—As usual.

MULBERRY—A splendid assortment, in quantity.

PRIVET—California and (true) Amoor River.

ROSES—Leading Hybrid Perpetuals, also Hardy Climbers.

MAGNOLIA Grandiflora, SPIREA Van Houttei and ALTHEAS.

Fraser Nursery Company
Incorporated HUNTSVILLE, ALABAMA

SIMPSON

is the name of the men who
grow the finest

CHERRY

that can be produced by suitable soil,
climate and expert knowledge.

Take a look at the stock or ask for a
sample and be convinced of the *extra*
quality of their

TREES

CHERRY, 2-yr., 1 1/8-inch up, 7 to 8 feet, for high-
class retail trade.

CATALPA SPECIOSA, 2 to 3 feet.

H. M. Simpson & Sons,
Vincennes, Indiana

Seedling and Transplanted Evergreens by the million

Arbor Vitae
Austrian Pine
Black Hill Spruce
Colo. Blue Spruce
Concolor
Engelmanii Spruce

Jack Pine
Norway Spruce
Pinus Ponderosa
Scotch Pine
White Pine
White Spruce

We have these in all sizes and ages. Also
a general line of nursery stock.

Evergreen price list now ready.

SHERMAN
NURSERY COMPANY
CHARLES CITY, IOWA

ENGLISH NURSERY STOCK

EXTENSIVE STOCK OF CONIFERS, including a quantity of well-shaped specimens for decorative purposes. Low prices can be quoted on all Conifers. **HARDY ORNAMENTAL EVERGREEN AND DECIDUOUS TREES.** ROSES, Standards, Dwarfs and others. **MANETTI** and other ROSE STOCKS. **FRUIT TREES** in large quantities. Transplanted **FRUIT TREE STOCKS.** **RHODODENDRONS** and other **AMERICAN PLANTS.** (A good stock of all hardy varieties of Rhododendrons). **CLEMATIS** and other **HARDY CLIMBING PLANTS.** Transplanted **FOREST TREES.** The stock is in excellent condition this season. **FIRST GRADE STOCK ONLY SUPPLIED.** 30 years' successful trading in the States. No Agents. Write direct for wholesale catalogue.

Walter Charles Slocock

Half-hour's rail from London by L. & S. W. Ry.
Main Southampton Line;

GOLDSWORTH NURSERY, Woking, Surrey, Eng.

KANSAS CITY NURSERIES

GEO. H. JOHNSTON, Proprietor
(Successor to Blair & Kaufman)

Reliance Building, Kansas City, Mo.

Offer for SPRING 1910 large stock of Carolina Poplars; Catalpa Seedlings; Cal. Privet; Concord Grapes; Currants; Asparagus; and a full line of Ornamental Shrubs, Paeonies, etc.

GRAPE VINES

We offer for Fall and Spring delivery the largest and most complete stock of GRAPE VINES in strong grades for nurserymen and dealer's trade.

We also have an extra fine block of President Wilder currants which have made a strong growth.

SEND LIST OF YOUR WANTS FOR PRICES

T. S. HUBBARD COMPANY
Established 1866 FREDONIA, N. Y.

"Nothing but Roses"

Spring Price List now ready
200 old and new sorts in 2 1/2 and 4-inch pots

THE LEEDLE FLORAL COMPANY®
SPRINGFIELD-OHIO.

A BARGAIN IN STANDARD PEARS
Extra size, 6 to 7 ft.; 1
inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere
Address,

PIONEER NURSERIES COMPANY,
Salt Lake City, Utah.

When writing to Advertisers please mention The National Nurseryman.

W. VAN KLEEF & SONS

Wholesale Growers of Nursery Stock

BOSKOOP, HOLLAND

Beg to announce that their W. van Kleef, Jr., is again in America calling on the trade. Please ask our prices for import orders before placing your esteemed orders elsewhere.

Specialties: Azaleas, Japan Maples, Rhododendrons, Roses, Clematis, Conifers, Young Trees, etc., etc. Address all correspondence until June 1st care of Messrs. Maltus & Ware, 14 Stone St., New York.
CATALOGUE FREE FOR THE ASKING.

Kallen & Lünemann BOSKOOP HOLLAND

Growers and Exporters of all kinds of Nursery Stock.

Our Phlox novelties **Rynstroom** and **Abel Tasman** deserve your attention.

Special quotations on Apple Stocks, Rhododendrons, Azalias, Roses, etc.

Special prices, catalogue and information cheerfully furnished by applying to our Mr. Henry Kallen, P. O. Box 256, Hoboken, N. J.

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Established 1841

Gardeners' Chronicle

IS THE LEADING HORTICULTURAL
JOURNAL IN THE WORLD

SUBSCRIPTION IN U. S. A., \$4.20
YEARLY POST FREE

Specimen Copy and Catalogue of Horticultural Books post free on
application to the Publisher—

**H. G. COVE, 41 Wellington Street,
Covent Garden, - LONDON, W. C.**

WHITE AND SCOTCH PINE SEEDLINGS

We still have a surplus of 1,000,000 plants for spring
delivery. **WRITE FOR PRICES.**

THE NORTH-EASTERN FORESTRY CO.

NEW HAVEN, CONN.

W. T. HOOD & COMPANY

"Old Dominion Nurseries"
RICHMOND, VA.

Offer for Fall 1910 and Spring 1911

PEACH TREES—fine assortment.

PEAR TREES—2 yr. unexcelled.

CHERRY—2 yr., none better.

CALIFORNIA PRIVET, 1 yr., fine plants.

NATURAL PEACH PITS—crops 1909 and 1910.

100,000 PEACH SEEDLINGS from buds for lining out

General line of Nursery Stock

Send us your want list

The New England Nurseries, Inc.

BEDFORD, MASS.

HIGH GRADE FRUIT AND ORNAMENTAL
TREES, SHRUBS, ROSES AND
HERBACEOUS PERENNIALS

We grow everything required for Orchard, Garden,
Lawn and Landscape Planting.

Catalog and Trade-list on application.

THE WAY TO FERTILIZE



You can increase your profits many times if you use Sheep's
Head Brand of Pulverized Manure. Free from weeds. Easy to
apply. Improves any soil. Send for book "Fertile Facts."

NATURAL GUANO CO., Dept. 23, Aurora, Ill.

PEACH SEED

We now have in stock VIRGINIA NATURAL PEACH SEED
crop 1910, can fill any size order.

VIRGINIA NATURAL PEACH SEED CO.,
4th Ave. & Clinton St., BALTIMORE, MD.



FRITSCH & BECKER
Seedmerchants
GROSS-TABARZ GERMANY.
SPECIALISTS IN
**Forest Tree Seeds &
Fruit Tree Seeds.**
Offers on application.



Partial View of Persimmon Trees in Nursery,
shown in our Retail Catalogue, page 23.

GLEN SAINT MARY NURSERIES CO.
Dept. 3, Glen Saint Mary, Florida

PERSIMMONS PRIVET ARBORVITAE

Florida-Grown
True to Name

Your trade will be
quick to see the value of
Glen Saint Mary stock—
our methods of propagat-
ing assure quality and
satisfactory results, and
much of our product will
succeed practically all
over the North. Let us
know your wants—we'll
gladly supply prices and
particulars on request.

Your Opportunity To Buy Harrison's "Quality Stock"

APRIL, 24, 1911

Following is a list of surplus trees, plants and shrubs, unsold on the above date. This is all first-class stock of real "Harrison Quality"—clean and healthy, with good roots.

We have first-class shipping facilities and can forward orders promptly. We have a private siding running into our sheds on which we can load several cars at once. All roots are carefully "puddled;" we pack in moss and straw, burlapping evergreens, crating strawberry and other small plants, and bundling or boxing trees. Carload orders are heavily packed and the doors sealed.

Give us a trial. This stock will please your trade and bring you more business. Usual terms: June 1, 1911.

STRAWBERRY

We Have Over Ten Million Plants

120,000	Aroma
30,000	Auto
52,000	Bederwood
10,000	Bismarck
52,000	Brandywine
834,000	Rubach
27,000	Chipman
310,000	Crescent
440,000	Duncan
138,000	Early Hathaway
54,000	Ekey
68,000	Excelsior
45,000	Fairdale Giant
200,000	Fendall
2,456,000	Gandy
188,000	Genl Marv
400,000	Haverland
30,000	Johnson's Early
2,280,000	Klondike
120,000	Lady Thompson
23,000	Mark Hanna
120,000	Mascot
125,000	Millionaire
186,000	Michel's Early
42,000	New York
54,000	New Home
79,000	Nick Ohmei
30,000	Norwood
72,000	Oak's Early
88,000	Oswego
5,000,000	Parson's Beauty
220,000	Sample
118,000	Senator Dunlap
240,000	Sharpless
120,000	Star
20,000	Stephens' Late Champion
75,000	Superior
248,000	Tennessee
330,000	Warfield

APPLE—two year

	6-7 ft.	5-6 ft.	4-5 ft.	3-4 ft.
	1-in.	$\frac{1}{16}$ -1 in.	$\frac{5}{16}$ - $\frac{1}{8}$ in.	$\frac{1}{2}$ - $\frac{3}{4}$ in.
Ben Davis.....	1000	1000	1000	1000
Cooper's E. Market				
ket.....	150	150	100	
Dominie.....	400	100		
Early Harvest.....	1000	1400	1200	150
Gano.....	500	2000	2000	2000
Golden Beauty.....	1000			
Lawver.....	50	100	50	
M. B. Twig.....	1000			
Missouri Pippin.....	200	400	100	
Myrick.....	200			
Payne's L. Keeper				
er.....	100	100		
Porter.....		100	200	50
Roman Stem.....	50	500	200	100
Red Astrachan.....			1000	1000
Salome.....			200	200
Stark.....	1130	1100	1000	170
Winesap.....	1000	5000	5000	5000
Yel. Transparent.....	500	1000	1000	4000

APPLE—one-year—budded

	5-6 ft.	4-5 ft.	3-4 ft.
	$\frac{5}{8}$ -in.	$\frac{1}{2}$ -in.	$\frac{3}{4}$ -in.
Cofelt.....	250	250	
Cooper's Early Market.....	400	400	
Carthouse.....	300	300	
Duchess.....			3000
Dominie.....	200	200	200
Early Harvest.....	3000	3000	3000
Early Strawberry.....	200	200	200
Early Colton.....	200	200	100
Fourth of July.....	300	300	300
Fannie.....	200	200	200
Fallowater.....	100	100	100
Fall Pippin.....	300	200	200
Golden Beauty.....	300	300	100
Golden Sweet.....	300	300	300
Gano.....	2000	2000	1000
Hyslop.....	700	700	300
Ingram.....	250	250	
Jeffries.....	400	400	
Kennard's.....	250	250	
Late Raspberry.....	200	200	
Longfield.....	200	200	
Lawver.....	200	200	
Limberville.....	300	300	
Lankford Seedling.....	700	100	100
Missouri Pippin.....	500	500	
Mann.....	250	250	
McIntosh.....	2000	3000	2000
Myrick.....	200	200	200
Northern Spy.....	1000		
P. W. Sweet.....	300	300	
Payne's Late Keeper.....	250	250	
Porter.....	200	200	
Pewaukee.....	250	250	
Romanite.....	200	200	
Rolfe.....	500	100	100
Red Astrachan.....	3000	3000	3000
Red June.....	500	500	200
Rambo.....	400	400	200
Rawles' Janet.....	300	300	100
Smith Cider.....	200	400	
Springdale.....	250	250	
Transcendent.....	300	300	300
Salome.....	200	200	200
Stark.....	1000	1000	1000
Tallman's Sweet.....	150	150	
Wolf River.....		1000	1000
Walbridge.....	200	200	
Winesap.....	1000	1000	1000
Yellow Transparent.....	5000	5000	7000

APPLE GRAFTS—one-year

	3-4 ft.	2-3 ft.
Ben Davis.....	1000	1000
Baldwin.....	50000	50000
Ensee.....	500	500
Gano.....	500	500
N. W. Greening.....	5000	5000
R. I. Greening.....	2000	2000
Red Astrachan.....	1000	1000
Rome Beauty.....	4000	7000
Stark.....	1000	1000
Transcendent.....	4000	1000
Winesap.....	15000	5000
York Imperial.....		10000
Yellow Transparent.....	2000	2000

APPLE, one-year—budded

	5-6 ft.	4-5 ft.	3-4 ft.
	$\frac{5}{8}$ in.	$\frac{1}{2}$ in.	$\frac{3}{4}$ in.
A. G. Russett.....	100	100	200
Arkansas Black.....	100	100	
Belleflower.....	500	500	
Ben Davis.....	8000	8000	8000
Baldwin.....	4000	4000	4000
Chenango Strawberry.....	300	300	300

SURPLUS LIST OF PEACH

	6-8 ft.	6-7 ft.	5-6 ft.	4-5 ft.	3-4 ft.	2-3 ft.	1-2 ft.
	1-in.	$\frac{3}{4}$ -1 in.	$\frac{5}{16}$ - $\frac{3}{8}$ in.	$\frac{1}{2}$ - $\frac{5}{16}$ in.	$\frac{3}{4}$ in.		
Alexander.....		140	130	30	20		
Amsden June.....	200	290	200	200	200		
Atlanta.....	200	200	200	200			
Belle of Georgia.....	1000	1000	1000	1000	1000	1000	500
Riley's.....	100	100					
Burke's Cling.....		100	220	130	160	120	110
Cornelia.....		210	210	110	180	70	60
Champion.....	1000	2000					
Chinese Cling.....	150	150	150	150	150	150	150
Connett's.....	500	1000	1000	1000	1000	1000	500
Easton Cling.....		100	220	160	130	90	30
Early Michigan.....	100	200	150	100	100		
Elberta.....	9000	9000	14000	10000	10000	10000	5000
Eureka.....	200	300	500	400	100		
Levy's Late.....	500	500	500	500	500		
Linden Cling.....		150	190	90	90	70	03
Loige.....	250	250	250				
Moore's Favorite.....	1000	1000	1000	1000	1000	1000	
Mt. Rose.....	500	500					
Newington Cling.....	200	200	50	50	50	50	50
Nina.....		100	210	110	120	70	40
O. M. Free.....	2000						
O. M. Cling.....		310	350	280	260	230	10
Preston Cling.....		180	210	80	60	40	20
Ray.....	1000	1000	1000	1000	1000	1000	1000
Stonewall Jackson.....		150	150	120	80	50	30
Sneed.....	400	400	300				
Stinson.....		160	190	110	100	40	
Stump.....	1000						
Sunrise Cling.....	300	300	300	200	100	100	100
Triumph.....	100						
W. H. Cling.....	300	300	300	300	300	300	300
Wilkin's Cling.....	200	200	200	200	200	200	200

ASPARAGUS—two-year

Tied 25 in a bunch

50,000	Palmetto,	50,000	Donald's Elmira
50,000	Barr's,	50,000	Giant Argenteuil
50,000	Conover's,		

PEAR—standard

	6-7 ft.	5-6 ft.	4-5 ft.	3-4 ft.
	$\frac{3}{4}$ -1 in.	$\frac{5}{8}$ - $\frac{3}{4}$ in.	$\frac{1}{2}$ - $\frac{5}{8}$ in.	$\frac{3}{4}$ -1 in.
Bartlett.....				5000
Garber.....	500	500	500	500
Kieffer, 10000, 5 to 6 ft., 1 year				
Kieffer, 10000, 4 to 5 ft., 1 year				
Kieffer, 10000, 3 to 4 ft., 1 year				

CHERRY—two year

	5-6 ft.	4-5 ft.	3-4 ft.	2-3 ft.
	$\frac{3}{4}$ -in.	$\frac{1}{2}$ -in.	$\frac{1}{2}$ -in.	$\frac{3}{4}$ -in.
Baldwin.....	200	200	200	200
Early Richmond.....	5000	10000	5000	2000
English Morello.....	100	100	100	100
Montmorency.....	3000	3000	2000	2000

PLUM—two year

	6-7 ft.	5-6 ft.	4-5 ft.	3-4 ft.
	1 in.	$\frac{3}{4}$ -1 in.	$\frac{5}{8}$ - $\frac{3}{4}$ in.	$\frac{1}{2}$ - $\frac{5}{8}$ in.
Barbark.....	200	500	500	300
Wickson.....	1000	1500	1500	500

GRAPE—two-year transplanted

Concord.....	90000
Moore's Early.....	30000

CALIFORNIA PRIVET

1000, 7 to 8 ft.	50000, 2 to 3 ft.
2000, 6 to 7 ft.	50000, 18 to 24 in.
10000, 5 to 6 ft.	50000, 12 to 18 in.
20000, 4 to 5 ft.	10000, 6 to 12 in.

DECIDUOUS TREES AND SHRUBS

American Elm—	
50, 8 to 10 ft. high, 1 $\frac{1}{4}$ in. diameter	
1000, 6 to 7 ft. high, 1 in. diameter	

PRICES QUOTED ON APPLICATION WHERE NOT GIVEN HERE.

To assure the best of the stock offered in this list, we recommend placing orders early.

Harrison's Nurseries
J. G. HARRISON & SONS PROPRIETORS
BERLIN MARYLAND

Designed and written by The McFarland Publicity Service, Harrisburg, Pa.

W. F. HUMPHREY, PRINTER, GENEVA, N. Y.



THE NATIONAL NURSERYMAN



JUNE, 1911

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

The Monroe Nursery

Established 1847.

OFFER A GENERAL LINE OF

Choice Nursery Stock

PEACH, STD. PEAR,
PLUM, CHERRY, Etc.

I. E. Ilgenfritz' Sons Co.

MONROE, MICH.

Mount Arbor Nurseries

E. S. WELCH, Proprietor

Shenandoah, Iowa

Make a Specialty of a Full Line of
General Nursery Stock for the
Wholesale Trade

Large Stock of

FRUIT TREES

SMALL FRUITS

CHERRY

APPLE SEEDLINGS

FOREST TREE SEEDLINGS

CALIFORNIA PRIVET

ROSES AND ORNAMENTALS

ALWAYS PLEASED TO QUOTE PRICES

EVERGREENS

OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI

by the thousand.

Andorra Nurseries,

WM. WARNER HARPER, Prop.

CHESTNUT HILL, PHILA., PA.

C R A B S

50,000 11/16 and up, 5 to 6 feet

45,000 9/16-11/16, 4 to 5 feet

20,000 3 to 4 feet branched

Alaska, Beeches' Sweet, Darth Early Strawberry, Excelsior,
Faribault, Florence, Hiller, Hyslop, Lyman's Pro. Minnesota,
Orange Pickers, Quaker B, Siberian, Sweet Russett, Sweet
Orange, Transcendent, Virginia, Whitney.

THE LARGEST STOCK OF CRABS IN
THE COUNTRY THIS SEASON

LET US PRICE YOUR LIST, WE ARE PUTTING THEM
DOWN CLOSE TO COST.

All extra smooth Stock—samples on request.

The Jewell Nursery Co.

LAKE CITY, MINNESOTA

Direct Importations

Fall and Spring Shipment
SOLE AMERICAN AGENTS FOR

VINCENT LEBRETON'S NURSERIES

LA PYRAMIDE, ANGERS, FRANCE

Fruit Stocks, Apple, Pear, Mahaleb, Myrobolan, Mazzard, Quince, etc. Also full line of Ornamentals suitable for lining out. Best packing and grading.

SCHAUM & VAN TOL,

BOSKOOP, HOLLAND

Large Nurseries of

Rhododendrons, Hardy Azaleas, Boxwood, Roses, Koster Blue Spruce, Evergreens, Clematis, Magnolias, Hydrangea P. G., etc., etc.

UNION NURSERIES

OUDENBOSCH, HOLLAND

Largest Exporters of

Norway and Schwedler Maples, Chestnuts, Tiliac, Planes, Thorns, Evergreens, etc.

We import to order

JAPANESE AND ENGLISH NURSERY STOCK

Jap. Maples, Sciadopitys, Thuya Obtusa, Iris, Azaleas, Kudzu Vines, Tree Paeonies, Hardy Jap-Lilies, Eng. Gooseberries (Whinham Industry, etc.) Manetti Stocks, Trained Fruit Trees, etc.

BAY TREES, Standards, pyramids and all other shapes from Belgium.

RAFFIA. Red Star Brand and other grades.

WRITE US for catalogues, special lists, etc.

SHIPPING. We have our own Custom House Dept. Special facilities at Antwerp, Hamburg, - Havre, Rotterdam, Madagascar, and all the principal ports.

McHutchison & Co.

17 Murray Street
NEW YORK CITY

The Shenandoah Nurseries

Offer the usual complete assortment of Nursery Stock including not only the best of the old sorts, but also a great many of the dependable new kinds.

Strong on well grown

APPLE	PEACH	SMALL FRUITS
PEAR	SHADE TREES	AND
PLUM	ORNAMENTALS	EVERGREENS

We specialize in

Apple Seedlings Apple Grafts
and Imported Stocks

Acres of Nursery Grown Forest Tree Seedlings

Glad to quote you prices on anything we can supply

THE SHENANDOAH NURSERIES

D. S. LAKE, Proprietor

SHENANDOAH, IOWA

Buy Early for Fall Orders

THE GRIFFING NURSERIES

Will have the most complete stock of trees and plants to offer from their

FLORIDA AND TEXAS NURSERIES

For delivery season 1911-12 ever offered in the South

We Can Probably Supply Your Wants

Budded Pecans, Japanese Persimmons, Figs, Muscadine Grapes, Satsuma and other Hardy Oranges, Grape Fruit and Kumquats, Mulberries, Non-sprouting Grafted Roses, Crape Myrtle, Biota Aurea Nana and other Conifers, Eucalyptus and Camphor Trees are a few of our leaders.

A complete assortment of Fruit, Nut, Ornamental Trees and Shrubbery.

THE

Griffing Brothers Company

General Sales Office, JACKSONVILLE, FLA.

— BRANCH SALES OFFICES AND NURSERIES AT —

MACLENNY, FLORIDA
MIAMI, FLORIDA

PORT ARTHUR, TEXAS
McALLEN, TEXAS

NURSERYMEN AND FLORISTS

looking for stock can find largest assortment in the
United States at the

Painesville Nurseries

Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
Plants, Grapes, Gooseberries, Small Fruits, Bulbs, Seeds, Palms
and other tender Greenhouse Plants

Have a large stock stored in frost proof cellars that can be shipped at any time desired;
switch from N. Y. C. lines direct into our packing house; can load without exposure.
Unsurpassed facilities for handling orders large or small. Catalogs and price lists free.

A few specials while they last:

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PRUNUS PISSARDI and TRILOBA CUTHBERT AND OTHER RASPBERRIES
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H. P. Moss Ramblers,
Climbers, Etc.

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Weeping Mulberries

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Clematis

Ampelopsis

Paeonies

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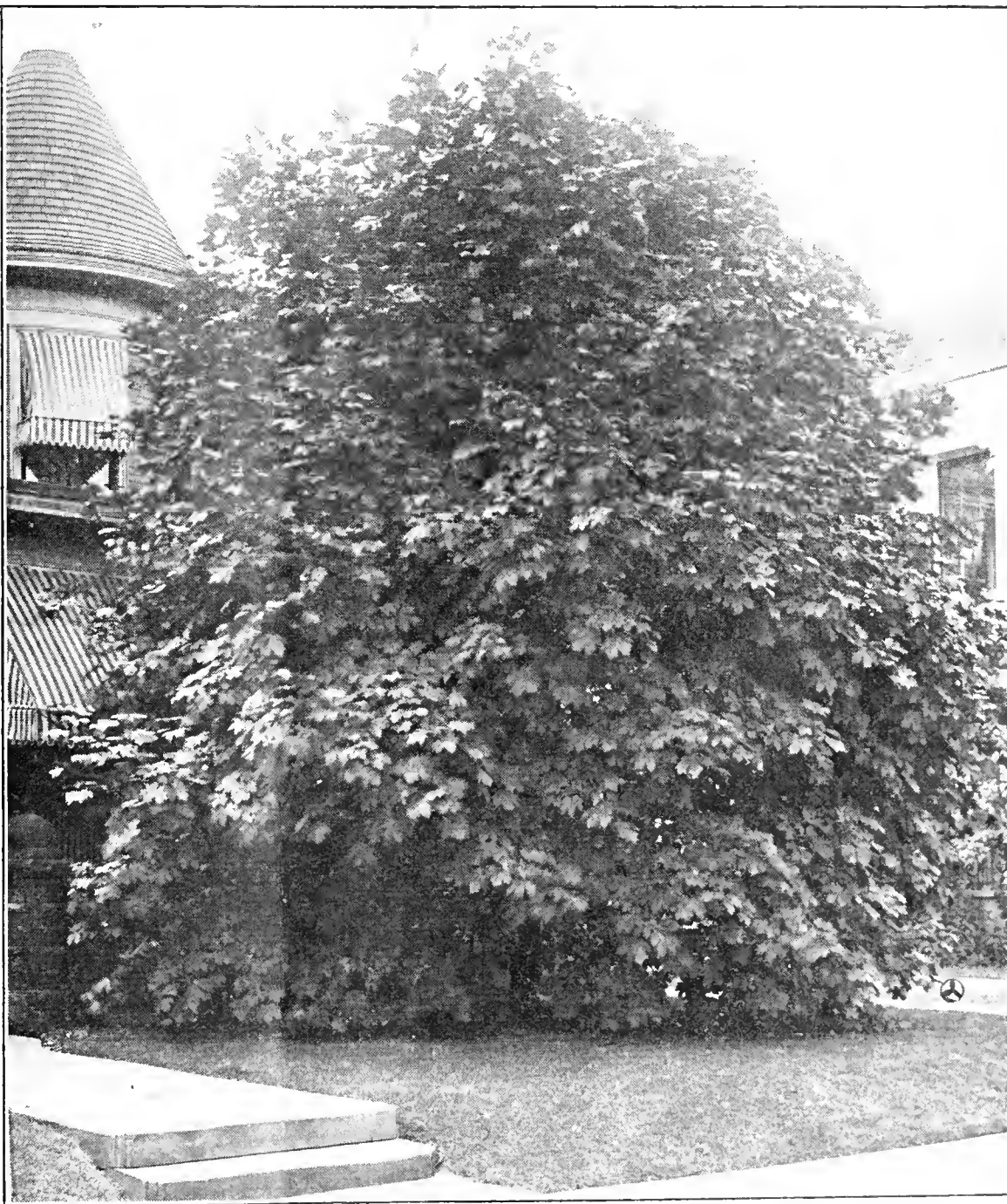
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WHITE PINE

BALSAM FIR

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Pyramidal Arbor Vitae
With or Without Ball

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Mount Hope Nurseries
ROCHESTER, N. Y.

Jackson & Perkins Company

offer to the trade an unusually complete assortment of Fruit and Ornamental Stock, including some things scarce and hard-to-find; their Tree Hydrangeas, Tree Lilacs, Roses, Clematis, Ampelopsis Veitchii, Dwarf Apples, Cherries on Mazzard, and a few other Specialties, have earned for the J & P goods the name of

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Jackson & Perkins Company

Dispensers of The Preferred Stock, grown at
NEWARK, which is in WAYNE COUNTY,
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SPECIAL NOTICE

APPLE QUINCE PEAR CHERRY
PEACH PLUM

A Fine Block of
Own Root Roses

ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
EVERGREENS PEONIES PHLOX
PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

Write for our Special Prices

Special Attention given to Dealers, complete lists
and carload lots.

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63 Years

700 Acres

Magnolia Grandiflora

Nothing can compare among broad-leaved evergreens with the beauty of foliage and flowers of our Southern Magnolia. Magnificent, large white flowers from the middle of April until August. Hardy at Philadelphia. 25,000 pot and field grown plants, all with finely branched roots, no better stock in America. Write for prices.



Your Trade Wants This Stock.

It pays you to have stock of such high quality as Berckman's Southern-grown trees and plants. We ship all over America and to many foreign points. Northern nursery stock cannot approach the splendid vigorous growth—the demands of our customers prove this.

PEACH TREES. All finest commercial sorts; absolutely true to name and free from disease. No cheap, inferior trees sold. All sizes. **ENGLISH WALNUT TREES.** Excellent quality. All size trees. **AUCUBAS.** Choice grown stock; best variety; all sizes of bushy and well-branched plants. **AZALEA INDICA.** 15,000 home-grown plants and plenty of imported stock. **OLEA FRAGRANS.** A most desirable, fragrant, flowering shrub for Southern gardens and Northern florists. **MAGNOLIA FUSCATA.** Various sizes in field grown and pot plants. **HEDGE PLANTS:** We have a large stock of **CITRUS TRIFOLIATA** and **AMOR RIVER PRIVET (TRUE)**. **CONIFERS** of special merit: **BIOTA AUREA NANA** (Berckman's Dwarf Golden Arborvitae), **B. CONSPICUA**, **B. JAPONICA FILIFORMIS**, **CUPRESSUS LAWSONIANA**, **C. PYRAMIDALIS** and **RETINOSPORA**.

We have the largest and most varied collection of Conifers in the South. A fine assortment of large specimens for immediate display. Write for prices on any of the above stock. Get our trade list and descriptive catalogue telling about our full line of Ornamentals, Fruits and Nuts. Your trade will appreciate the quality of Berckmans' stock. Real trade builders.

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Established 1856
Over 450 Acres in Nurseries
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The Best Tree Digger on Earth



Used and Recommended by Leading
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The one we have used for years and by far the most satisfactory of any we have ever seen. It does exactly the work for which it was designed and does it right. If interested we will be glad to send description and prices.

Stark Bros. Nursery & Orchards Co.

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L. H. BAILEY

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APPLE, assorted, heavy in light grades

PEAR, Standard, assorted, extra fine lot of Kieffer

CHERRY, 2 year, the finest stock we have ever grown

PLUM, Japan and English, good assortment of varieties

PEACH, choice stock in all grades

EVERGREENS

ARBOR VITAE, 2 to 8 ft.

NORWAY SPRUCE, 2 to 8 ft.

ARBOR VITAE, 2 to 4 ft.

BALSAM FIR, 2 to 5 ft.

These evergreens have been transplanted, and are fine specimen plants. Can supply in carload lots

Silver Maple, Am. Elm, C. L. W. Birch, all sizes
Catalpa Bungei, 3 year heads

Catalpa Spec. Seedlings, all grades. Golden Willow 2 year plants

Stock grown at Dansville, N. Y. and Troy, O.

Franklin Davis Nursery Co.

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We offer for FALL 1911 and SPRING 1912

APPLE 1 and 2 year; heavy on York Imperial, Stayman's Winesap, Blacktwig, Grimes Golden, and other standard varieties.

PEAR, STANDARD, Kieffer, 2 and 3 year, and other leading kinds.

PEACH; Expect our Peach to be fine; we have a heavy stock and will book orders for several carloads now. Peach are bound to advance. We are heavy on Elberta, Carmen Crawford's Late, Old Mixon Free, Stump, Beer's Smock, etc., etc.

ASPARAGUS, 1 and 2 year; Palmetto, Barr's, Conover's Giant.

CHERRY, 2 yr. leading varieties.

PRIVET, 1 and 2 year, a fine lot of heavy No. 1 plants.

POPLARS, a fine lot of Carolina and Lombardy in all sizes, by the carload.

PLANES, a fine lot of Oriental Planes in all sizes.

CATALPA SPECIOSA, several thousand at a low price.

ELMS, AMERICAN; Several hundred nice trees.

WALNUTS, JAPAN, in all sizes.

Extra large bushy SHRUBS, such as Altheas, Weigelas, Spireas, Deutzias, Snowballs, Judas, Hydrangea, P. G.

Extra large SUGAR MAPLES several hundred 3 to 3 1-2 and 4 to 4 1-2 inches, fine trees, with good heads and straight bodies.

We also have a general line of other stock. Send us your want list.

Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries
Huntsville, Ala.

JESSIE S. MOSS, Prop.

We offer for Fall of 1911 and Spring of 1912 in large quantities as usual:

SPECIALTIES

APPLES—Commercial varieties, one year, in large supply. As fine in quality as ever grown.

PEARS—Kieffers, one and two years old. A much smaller crop than heretofore.

CHERRIES—On Mazzard. One year. Bing, Lambert, Napoleon, Black Tartarian.

CHERRIES—On Mahaleb. One and two years. Ea. Richmond, Dyehouse, Montmorency, Wragg, Royal Duke, in small supply.

PEACHES—We excel in Peaches, and of these we will have as fine a stock as we have ever grown, both in one year and June Buds.

ROSES—Budded. We will have a large and fine stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.

PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.

MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

See Price List for particulars.

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Have you seen and examined the quality and finish of our

Rawhide Brand of Shipping Tags and Tree Labels

printed or plain, strung or wired?



This stock is especially adapted to the most severe usage, being thoroughly waterproof & weather-proof. "Once used, always used."

Send for samples and prices. Our reference are the largest nursery men in the United States.

The Denney Tag Co.

WEST CHESTER, PENNSYLVANIA

RED STAR RAFFIA

The most satisfactory brand on the market.
It is a guaranteed quality at
a reasonable price.

NURSEYMEN RECOMMEND IT.

Budding time is here. If you need a new supply of Raffia this season, now is the time to order. When ordering keep in mind that to have the best success with your budding, good Raffia is necessary. "Red Star" Brand is the best for this work. Order it and you will be assured of satisfaction.

THOMAS MEEHAN & SONS

Direct Importers of Raffia,

DRESHER, near Philadelphia, PA.

BOBBINK & ATKINS

WORLD'S CHOICEST NURSERY PRODUCTS

ROSES, in all kinds
and varieties

EVERGREENS and CONIFERS,
in several hundred
kinds and varieties

RHODODENDRONS, Hardy,
ENGLISH HYBRIDS,
Maximum and Catawbiense

BOXWOOD, in all shapes,
forms and sizes

HARDY AZALEAS, in all
varieties and colors

FLOWERING SHRUBS, in
bush and standard forms
in hundreds of kinds
and varieties

JAPANESE MAPLE, in all
colors and varieties

SHADE TREES, in hundreds
of useful and attractive
varieties

MAGNOLIAS and other
FLOWERING TREES

WEeping and STANDARD
TREES, in many varieties

HEDGE PLANTS, in all
popular kinds

HARDY TRAILING VINES
and CLIMBERS

HARDY VINES and CLIMBERS
in pots

SPRING and SUMMER
FLOWERING BULBS, ROOTS
and PLANTS

PALMS and BAY TREES by
the thousands

Pot-grown
FORCING PLANTS, Autumn
Delivery

FRUIT-TREES,
home-grown, imported,
DWARF and TRAINED

SMALL FRUIT, in all
kinds and varieties

NUT TREES, profitable
kinds

OLD-FASHIONED, Hardy
FLOWERING PLANTS, in
thousands of kinds and
varieties

PAEONIAS, IRIS, PHLOX
FERNS,
HARDY GRASS

KITCHEN
HERBS and ROOTS

RUTHERFORD PARK LAWN
GRASS SEED

AUTUMN BULBS, Dutch,
French and Japanese kinds

Interior and Exterior
DECORATIVE PLANTS, in
large variety

VISITORS to our nurseries
are always welcome

ASK FOR WHOLESALE
CATALOG

Nurserymen, Florists and Planters
RUTHERFORD, N. J.

Annual Convention American Association of Nurserymen

BADGE NO.

7

**The McFarland
Publicity Service**

BADGE NO.

8

**The J. Horace
McFarland Company**

JEFFERSON THOMAS

O. P. BECKLEY

J. HORACE McFARLAND

**The McFarland Organizations
Harrisburg, Pennsylvania**

A Three-fold Increase of Business in Three Years



THIS record has been made in the case of one firm of nurserymen whose advertising, catalogues, "follow-up," etc., were placed in our hands three years ago.

With the permission of our customers, we are printing the story of our handling of their selling effort in an issue of "Orders" that will be ready some time in June. This rather fully explains our methods.

If you are interested and will tell us so, we shall be glad to send you a copy. Just write us a postal, saying, "Send me the current number of 'Orders'"—and sign it, to tell us who you are, and where you are.

THE McFARLAND PUBLICITY SERVICE
HARRISBURG, PA.

Fungous Diseases of Plants

By BENJAMIN MINGE DUGGAR

Professor of Plant Physiology in Cornell University

This book is designed to serve as a substantial reference book and is the result of special experience in the study of the practical aspects of plant pathology. There is a comprehensive discussion of the chief fungous diseases of cultivated and familiar plants.

Each disease is discussed with reference to its occurrence, the nature of the lesions or processes induced, the structure, life history, and cultural relations of the casual fungus, and practical methods for prevention or control.

The literature of the subject is freely cited, and a host index provides a ready reference to all of the important fungous diseases occurring upon any host. The method of treatment followed is intended to facilitate and stimulate the work of the nurseryman and practical fruit grower and to enlarge the interests of the general reader. The book is very fully illustrated from photographs and from drawings especially made for this work.

8 vo. 508 pages, Illustrated.

\$2.40. Trade Edition.

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LARGE STOCK, BOTH SEEDLINGS AND TRANS-PLANTS, OF

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FOREST TREE SEEDLINGS

IMMENSE STOCK OF SEEDLINGS AS FOLLOWS:

CATALPA SPECIOSA
BLACK LOCUST
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LINDENS
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WALNUT
ELM
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BIRCH
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*Advance Price List of Evergreen and Forest Tree Seedlings
now Ready*

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EVERGREEN SPECIALIST
DUNDEE, ILLINOIS

C. M. HOBBS & SONS

BRIDGEPORT, IND.

APPLE—1, 2 and 3 year in leading sorts.

CHERRY—1 and 2 year fine stock.

PEAR—1 and 2 year in leading sorts.

PLUM—1 and 2 year Japan, European and native sorts.

PEACH—1 year leading sorts.

PRIVET—1 and 2 year fine stock.

SHADE TREES in car load lots Norway Maple, American Elm, Box Elder, Silver Maple, etc.

We also have a general line of other stock not mentioned above.

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William Street Nurseries

We have a large surplus of the following stock:

CHERRY, PLUM, PEAR and QUINCE—
2 year, all grades.

MAPLE—Norway, Silver, Weirs Ct. Leaf
CUT LEAF BIRCH

HYDRANGEA—Bush and Tree

H. P. ROSES and CLIMBERS

CLEMATIS—Large Flowering and Panic-
ulata

CALIFORNIA PRIVET

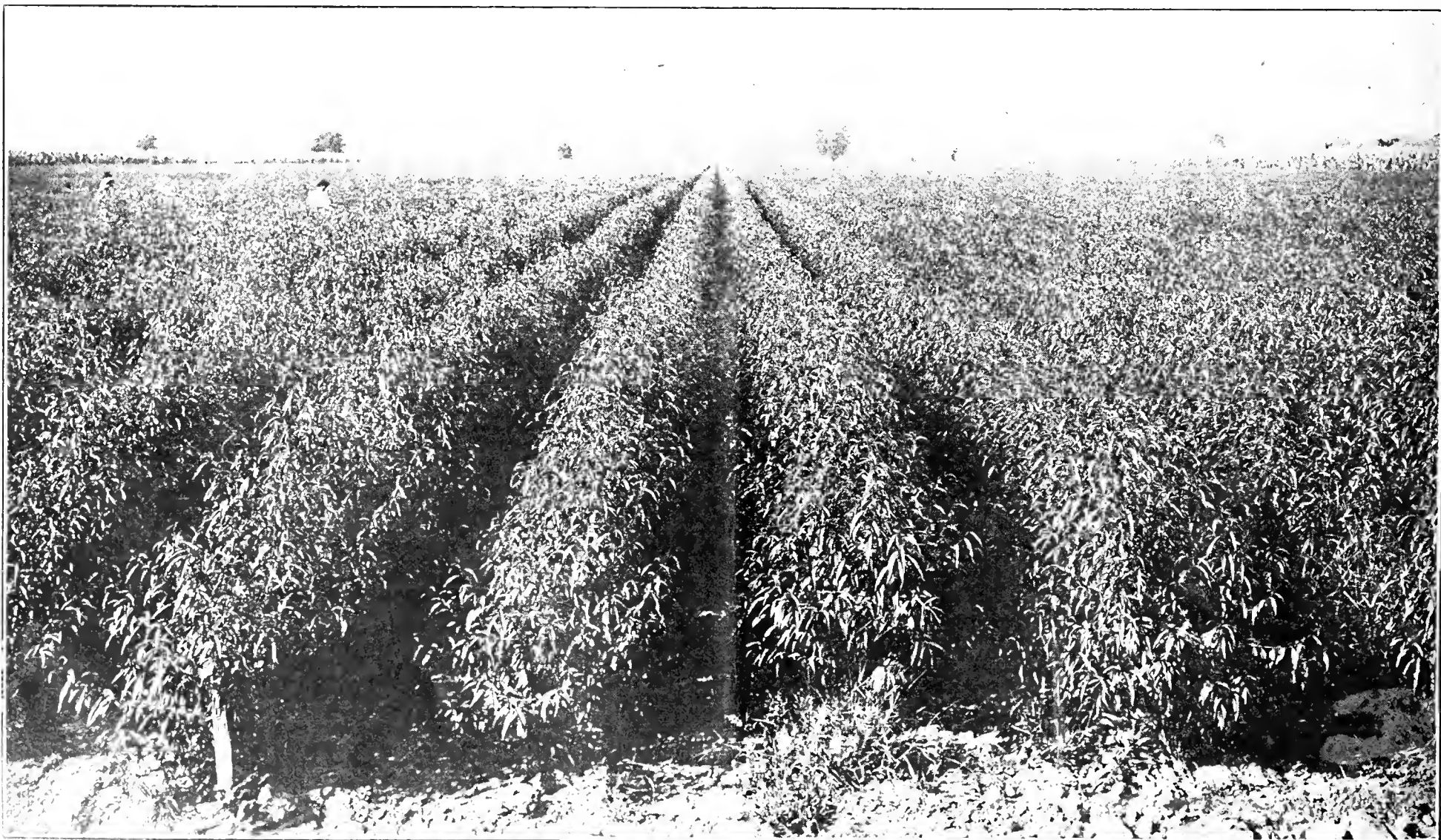
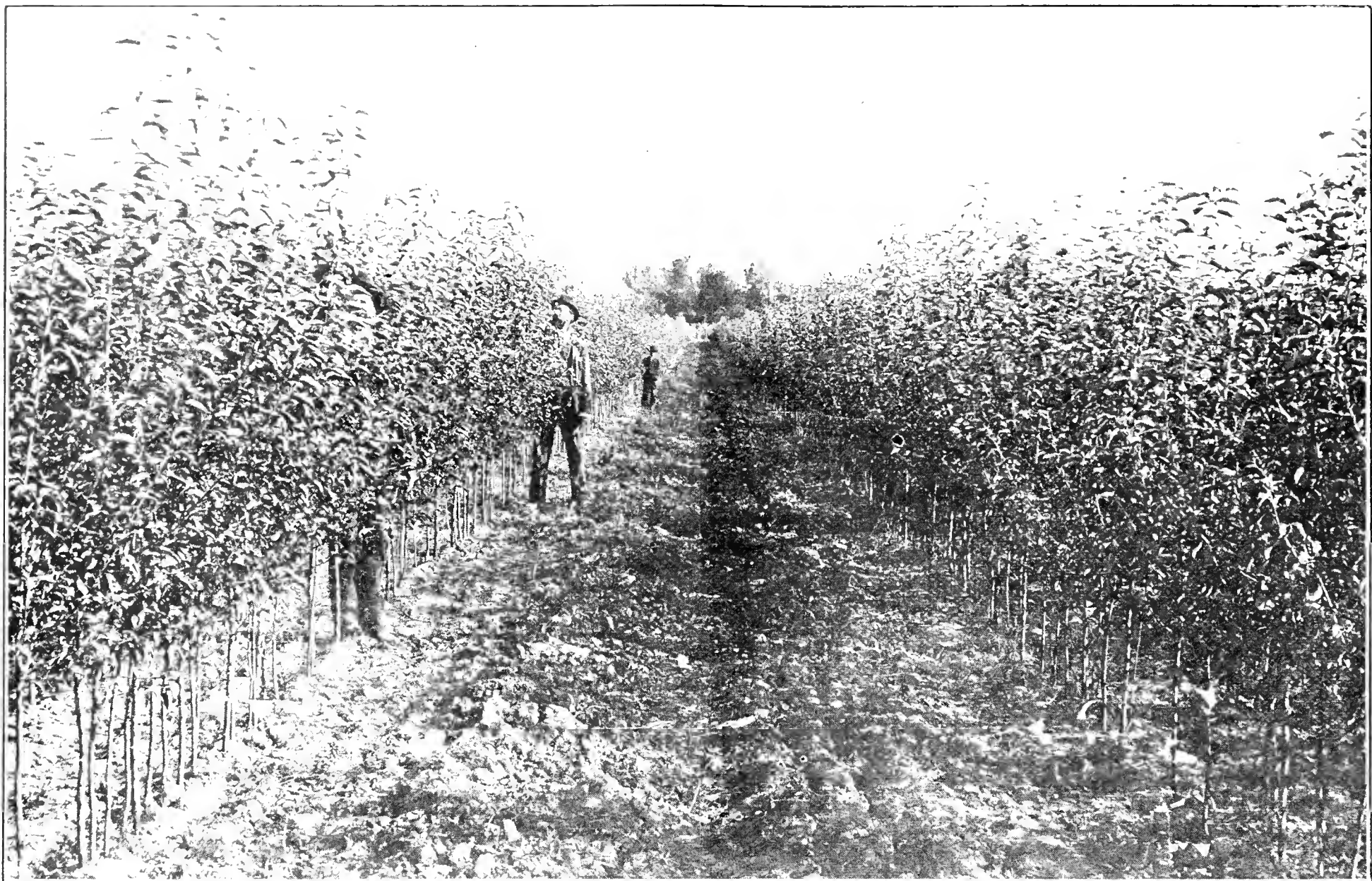
A GENERAL LINE OF SHRUBS

Dealer's lists especially solicited for quotation.

All stock in storage ready for early Spring Shipment.

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The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XIX.

ROCHESTER, N. Y., JUNE, 1911

No. 6

A MODERN GRAPE AND SMALL FRUIT GROWING ESTABLISHMENT

A Branch of One of the Leading Nursery Firms of the United States

STARK BROTHERS, at North Girard, Pa.



PLANTING GRAPE CUTTINGS IN THE NORTH GIRARD PLANT OF THE STARK BROTHERS CO.

Successful plant growing depends fundamentally on two things: soil and climate. After these primary factors, certain economic conditions are to be considered. These latter are incident to the establishment of all enterprises, and are to be considered by the promoter in association with his own environment.

Soil and climate dominate, because they are primary factors affecting the quality of the product. It is a recognized principle that high grade products cannot be profitably produced unless exact adaptations of soil exist. This is as true in plant growing as in brick making, for quality is the final test, and it is not more a question of cost of production than it is of intrinsic merit. In cement making and pottery manufacture, the final popularity of the product is deter-

mined by the peculiarities of soil or original constituent as well as by the skill of the manufacturer. So in plant growing, we repeat that the final test is the quality of the product itself, and this is in large measure determined by the character of the soil, and its climatic environment.

SOIL REQUIREMENTS FOR GRAPE AND BUSH FRUITS

Certain plants are more fastidious in their soil adaptations than others, and in order to produce the highest grade of product of these, the soil requirements must be observed with special exactness. Prominent among the plants which levy upon the fruit grower peculiar demands are the members of the genus *Vitis*, the grape, and also most members of the bush fruits. In order to produce a vigorous

plant with well developed root systems, a warm, friable, well drained soil, highly stored with humus and available plant food, is essential.

The southeast shore boundary of Lake Erie has long been noted as a grape growing region. For more than half a century vineyards have been cultivated and grapes have been grown successfully in that section. The special reason for this is that the type of soil prevailing meets the somewhat exacting requirements of the grape.

their way into the lake, causing the valleys surrounding the streams to develop currents of air providing a desirable type of air as well as soil drainage. The soil, then, as a whole is characterized by mellowness, warmth, and porosity, the exact requirements of the grape and the features demanded by the nurseryman who is in the plant growing business. It is for this reason that the Chautauqua and Erie County regions have become so famous as grape-growing sections.



OPENING THE FURROW AND COVERING THE CUTTINGS
STARK BROTHERS COMPANY

A MARINE OR LACUSTRINE SOIL

The soil in this region is an example of the marine type so frequently found on the borders of the Great Lakes, but this old shore line of Lake Erie exhibits the peculiarities of its make-up in a rather remarkable degree. It consists of stratified gravels into which has been worked a considerable quantity of silt, loam, and humus. The drainage is perfect, and the soil being richly supplied with humus has high water holding capacity. This soil was deposited in shallows off the shore line and was subsequently raised above water level. These lands are often deeply gashed by streams working

ACTIVITIES OF STARK BROTHERS

This well known firm of nurserymen with its headquarters established at Louisiana, Missouri, has in obedience to the law of adaptation established plant growing branches in different parts of the country for the production of special classes of nursery stock, as their judgment and experience have dictated. With a general ornamental and herbaceous and fruit tree plant at Louisiana, with a special fruit stock nursery at Fayetteville, Ark., for the trade of the Southwest, with a cherry, plum, pear, and apple branch in the Valley of the Genesee at Dansville, Western New York, they

are admirably equipped to turn out large quantities of high grade stock. These establishments were supplemented some ten years ago by a grape and small fruit growing plant at Portland, New York, in the heart of the Chautauqua grape belt. Owing, however, to inability to secure sufficient suitable land for their purposes, some two years ago the Company acquired a fine tract farther west on the Lake Shore and Nickel Plate Railways, near North Girard, Pa.

The situation here is admirable, located as it is on a well drained, elevated plateau, providing good air and soil drainage, alongside the valley of the Elk Creek. It lies directly on the line of the interurban between Cleveland and Buffalo, so that transportation facilities for freight and

stock in great quantities and of fine quality. One of the most interesting scenes we have witnessed in recent times was the planting in the most expeditious form of grape cuttings by a gang of trained workers. The planting of cuttings this year will run into the millions, and covers a large tract of ground.

The establishment is being rapidly enlarged, for the experience of the past two years in the growing of grapes, currants, gooseberries, and the like, has demonstrated beyond question that the soil and conditions are right for the production of high grade stock. This North Girard branch of Stark Brothers is in charge of Mr. Inches, himself a Missouri product, who demonstrated at Portland in a very satisfactory manner his ability as a manager of labor and a



Distributing the Grape Cuttings.



Sticking the Grape Cuttings: Stark Brothers Company.

passenger service are excellent. The soil, as we have said, is a fine gravelly loam, well filled with humus.

A recent visit to this grape and small fruit growing nursery revealed many interesting features. We were struck by the adaptability of the soil to clover growing. This is most important, for clover in the nurseryman's rotation is an absolutely essential factor. It means that the humus content of the soil may be readily replenished. The Girard plant has replaced the Portland tract, and now in its third year is turning out and being stocked with the standard varieties as well as the promising newcomers in grapes and bush fruits. At the time of our visit, the last of the grape cuttings were going into the ground at the rate of some 300,000 per day. These included some of the newer varieties which Messrs. Stark Brothers are propagating for early introduction. King Philip and Hicks are among these varieties, the one being of eastern production, and the other claiming Missouri as its native state. The new tract at North Girard is turning out grape, currant, and gooseberry

grower of plants. We are interested in this type of plant growing which takes the grower to the conditions necessary to the production of the highest and best type of product which he is interested in raising. The line of adaptation of varieties and classes of fruit is one which neither the orchardist nor the nurseryman can afford to overlook.

EXPENSIVE AND UNWELCOME GUESTS

Commissioner Pearson of the Department of Agriculture at Albany has distributed colored plates, accompanied by descriptions of the gipsy and brown-tail moths. With these is a letter calling attention to the necessity of immediate notification of the state authorities when any of these pests are noticed. New England has already expended enormous amounts of money in an attempt to control these moths, but millions of dollars' worth of damage has been done by them, notwithstanding. It is said that they are working westward; therefore, eastern New Yorkers should be especially watchful.

AMERICAN ASSOCIATION OF NURSEYMEN

Southern Hotel, St. Louis, Mo., July 14-16, 1911

PROGRAM

BUSINESS

WEDNESDAY, JUNE 14TH, 9:00 A. M.

(One session each day)

Addresses of Welcome—Mayor of St. Louis; Thomas L. Cannon, Secretary of Convention Bureau, City of St. Louis.

Response—J. W. Hill, Des Moines, Iowa.

President's Address—W. P. Stark, Louisiana, Mo.

REPORTS

Secretary—John Hall, Rochester, N. Y.

Treasurer—C. L. Yates, Rochester, N. Y.

Transportation Committee—D. S. Lake, Shenandoah, Iowa; Charles M. Sizemore, Louisiana, Mo.

Legislative Committee—East of Mississippi River, Wm. Pitkin, Rochester, N. Y.; West of Mississippi River, Peter Youngers, Geneva, Neb.

Tariff Committee—Irving Rouse, Rochester, N. Y.

Committee on Co-Operation with Entomologists—J. W. Hill, Des Moines, Iowa.

Committee on Publicity—Orlando Harrison, Berlin, Md.

Committee on Co-Operation with Fruit Growers and Associations—J. M. Irvine, St. Joseph, Mo.

Committee on Trade Opportunities—Jefferson Thomas, Harrisburg, Pa.

Committee on Nurserymen's Share in Civic Improvements—J. Horace McFarland, Harrisburg, Pa.

Committee on Membership—John Watson, Newark, N. Y.

Committee on Root Gall—E. A. Smith, Lake City, Minn.

Committee on Entertainment—F. A. Weber, Nursery, Mo.



D. S. Lake, Shenandoah, Iowa,
Transportation.

WEDNESDAY EVENING
Meeting of State Vice-Presidents, subject to announcement.

(Members from each State are urged to consult together and select their new vice-president).

Meeting of American Nurserymen's Protective Association, in the Southern Hotel, at 8 o'clock. Thomas B. Meehan, Secretary.

Meeting of Retail Nurserymen's Association at 8 o'clock. Guy A. Bryant, Secretary.



Professor S. J. Hunter, Lawrence, Kas.
Our Official Relations with "Bugmen."

THURSDAY MORNING, JUNE 15TH, 9 O'CLOCK

Report of Vice-Presidents on Officers and Place of Next Meeting.

"The Nurserymen and the Entomologist"—Prof. S. J. Hunter, Lawrence, Kans.

"Spring Versus Fall Planting of Fruit Trees"—Dr. J. C. Whitten, Professor of Horticulture, Columbia, Mo.

"Ethics of Our Business"—Harlan P. Kelsey, Salem, Mass.

"Fraternity Among Nurserymen"—Charles T. Smith, Concord, Ga.

"Standardization of Grades"—W. J. Maloney, Dansville, N. Y.; E. P. Bernardin, Parsons, Kansas.

"Standardization of Prices at Wholesale"—T. J. Smith, Geneva, N. Y.

"Standardization of Prices at Retail"—Abner Hoopes, West Chester, Pa.

"Should Large Buyers not in the Trade, Parks, Cemeteries, Public Institutions, etc., be Given Trade Prices?"—Thomas B. Meehan, Dresher, Pa.; Wm. Pitkin, Rochester, N. Y.



Theodore J. Smith, Geneva, N. Y.
Wholesale Prices.



W. J. Maloney, Dansville, N. Y.
Grades.

FRIDAY MORNING, JUNE 16TH, 9 O'CLOCK

"How to Extend Our Wholesale Markets"—E. S. Welch, Shenandoah, Iowa.

"How to Extend our Retail Markets"—J. M. Pitkin, Newark, N. Y.; F. H. Stannard, Ottawa, Kans.

"Our Mailing Lists—Who are Entitled to Trade Lists?"—E. W. Kirkpatrick, McKinney, Texas; Jim Parker, Tecumseh, Okla.

"Our Mailing Lists—Should They be Classified?"—C. J. Maloy, Rochester, N. Y.; A. J. Robinson, Bedford, Mass.

"Our Mailing Lists—How Best Kept Up-to-Date?"—C. J. Brown, Rochester, N. Y.

Unfinished Business.

Resolutions.

Adjournments.

ENTERTAINMENT

Entertainment Committee—Frank A. Weber, Chairman; John Watson, Robert Chase, Wm. Campbell, C. C. Mayhew, A. M. Ferguson.

Local Entertainment Committee—Wm. A. Weber, H. C. Irish, J. W. Schuette, C. C. Sanders, L. F. Dintelmann, George Weber, Emil Rothenheber, Walter Weber.

Local Ladies' Entertainment Committee—Mrs. J. W. Schuette, Mrs. Wm. A. Weber, Mrs. H. C. Irish, Miss E. Kirkbride, Mrs. C. C. Sanders, Miss Edith Schuette, Mrs. Walter Weber, Miss Laura B. Sanders, Miss Jessie B. Sanders, Mrs. Minnie Steele, Mrs. Geo. Weber.

PROGRAM

WEDNESDAY, JUNE 14TH.

2 P. M.—Special cars to Missouri Botanical Gardens. Spend about two hours at the Gardens, return to Hotel about 6 p. m.

8 P. M.—It has been deemed advisable to leave this evening open for Protective Association meetings and for the use of the Program Committee as they may see fit.

THURSDAY, JUNE 15TH.

2 P. M.—No definite arrangements have been made for this afternoon. The Committee will, however, have something to offer you, so that you will not have an opportunity to take a noonday siesta unless you so desire.

7 P. M.—Ladies will be taken in special cars to one of our popular Summer Gardens. After the performance, the ladies will have a little banquet for themselves, where they will do all the speech making, (no reporters will be permitted, if the committee can help it).

8 P. M.—All members of the American Association of Nurserymen will be invited to the "Shaw Banquet" given by the Trustees of the Shaw Fund.

FRIDAY, JUNE 16TH.

1 P. M.—All aboard for the "Steamer Alton" for a trip on the beautiful Mississippi River. Arrive at Jefferson Barracks 4:15 p. m. where we will be entertained with Military music, dress parade, etc.

Leaving 5:30 arriving in St. Louis about 7:30. Luncheon will be served on board boat immediately after leaving the landing. An orchestra will supply music, and we are going to let you do just as you please on this trip.

OFFICERS OF ASSOCIATION

OFFICERS AND COMMITTEES FOR 1910-1911

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Legislation West of Mississippi River—Peter Youngers, Geneva, Neb.

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Program—J. H. Dayton, Painesville, O.

Publicity—Orlando Harrison, Berlin, Md.

Exhibits—J. W. Schuette, 5600 Gravois Avenue, St. Louis, Mo.

Arrangements—John Hall, Rochester, N. Y.; J. H. Dayton, Painesville, O.; F. A. Weber, Nursery, Mo.

Editing Report—John Hall, Rochester, N. Y.; Prof. John Craig, Ithaca, N. Y.

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Forestry—A. J. Brown, Geneva, Neb.

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Trade Opportunities—Jefferson Thomas, Harrisburg, Pa.

Nurserymen's Share in Civic Improvement—J. Horace McFarland, Harrisburg, Pa.

Membership—John Watson, Newark, N. Y.



BUSINESS MOVEMENTS

E. Fred Rowe, for many years connected with James Vick's Sons, of Rochester, has left his connection with that house to take a place with the McFarland Publicity Service as chief of its copy department.

When Mr. Rowe arrived in Harrisburg to assume his new duties he found a pleasant remembrance from his former employers and associates in the form of a vase of beautiful American Beauty Roses bearing the inscription, "Best Wishes of Old Friends and Former Associates of Vicks."

A REMINISCENCE OF EARLY NURSERY DAYS IN CENTRAL IOWA

Jimmy Smith, the Pioneer Des Moines Nurseryman

By Captain C. L. WATROUS

This takes us almost back to the time when a few United States dragoons had a little fort, in the year 1842 or 1843, on the Des Moines at the forks of the Raccoon.

In February, in 1847, there walked into Des Moines, a tall, slender man from Kentucky, leading two small boys, and carrying a peck of apple seed in a sack over his shoulder. So far as tradition goes, that was the very beginning of the beginning of the nursery business in the Des Moines district. He was always called "old James Smith" or "Jimmie Smith," as the case happened to be. Although he was not much, if any, beyond fifty, he looked like an old man.

He was tall, very spare of feature and form, quick of motion, and with the very keenest eyes and the clearest memory of any nurseryman who ever walked among trees in this region. He knew and could name in an instant, at sight, more varieties of trees, in nursery and in orchard, and of fruits on the table, than any other man who was ever here.

He was a very enterprising man in testing new varieties; so much so that when I reached Des Moines in the spring-time of 1869, he had eighty acres of orchard, and had tested almost the whole list of the favorite eastern and southern fruits, especially apples. He knew their strong points and their weaknesses, and transmitted that knowledge to others of us who followed him. His decisions have seldom, if ever, been questioned, and I think never reversed.

He soon had a large nursery of the old fashioned sort, whereunto men came, sometimes with their wives and children, from any distance up to fifty or sixty miles, seeing their trees dug and taking them home with them in a wagon or on horse-back. Before I came, in '69, he had gained a moderate fortune and quit the business.

I remember that on one occasion he spoke of again taking up the nursery business, but his wife, with a look of alarm, protested with all her might, saying she never again wanted to live through her experiences during the years of his greatest nursery successes. She said that there would sometimes come into the house forty or fifty strangers for dinner or perhaps half as many to be sheltered and fed over night, and this for weeks at a time, and such a life killed a nurseryman's wife, if it did not kill him.

James Smith could gather the finest collection of apples grown from orchards about Des Moines from trees out of his own nurseries that have ever been brought together here. It was no uncommon thing for him to gather from one to two hundred varieties and spread them out on the floor in a

spare room of his large brick farmhouse, until he was ready to send them to the exhibit. There was never a thought of a label amongst all those varieties,—he knew them as a mother knows her children, and could at a moment's notice talk interestingly of their virtues and their frailties.

His exhibits at the long ago meetings of the American Pomological Society excited the wonder and admiration of eastern growers. He introduced the Concord Grape to this region, growing hundreds of thousands of vines, altogether from layers, having many acres of vines growing for this purpose. Out of the Concord Grape, he realized a small fortune and was content.

THE CAPITAL CITY NURSERIES

When I came to Des Moines in the spring of 1869, there came on the same train a German from Syracuse, New York, who sold that summer and delivered in the autumn

over \$6000 worth of eastern grown stock. This was the last great sale from an outside nursery which I ever knew in this region.

There were, at that time, some sixteen nurseries within five miles of the city. Practically all started through the influence of James Smith. None, I think, did a commercial business, but

waited for customers to come and buy their stock. When I started, one among these said, "Another fool is going to start in the nursery business at Des Moines. He will fail and he ought to know better."

Having planted some young stock, I mounted a bay pony and rode about forty miles from home before beginning to offer any for sale. For ten years I sold and delivered nursery stock from Des Moines, shipping it out over the railroads. That was, so far as I know, the first beginning of commercial nursery work in Des Moines.



1 yr. Gooseberry Plants. Stark Bros.

OBSERVATIONS ON CONVENTION PROGRAM

The program suggestions of Chairman J. H. Dayton for the St. Louis Meeting, as published, are practical and right to the point.

There are many practical questions requiring consideration at the present time. For instance, the matter of some co-operative arrangements with the trunk lines toward preventing the vexatious and ruinous delays in nursery-stock shipments—both car lots and less than car consignments.

There might also be some clean-cut action by the Association in discouraging the practice of some nurserymen in accepting orders. Then, when the season is about over, advising that the stock cannot be supplied.

SOME IMPORTANT ENEMIES OF NURSERY AND ORCHARD

The Peach Tree Borer

By JOHN B. SMITH, New Jersey

In bulletin 235 of the New Jersey Agricultural Experiment Stations, Dr. Smith devotes about eight pages to a consideration of the peach tree borer, of which the following is an abstract.

As the shining blue moth which is the parent of the peach tree borer is seldom seen by the orchardist, the form which is most familiar is the white grub-like caterpillar which may

None of the caterpillars mature till late June, and the life of each moth is but a few days. However, the process of transformation keeps up all during the summer.

While trees are not always killed when infested by borers, their vitality is lowered, so that they become liable to some other attack, and furthermore they do not produce the amount of fruit which might otherwise be expected.



Bear Pit and Lake, Fair Grounds Park, St. Louis.

be seen at any time during the summer or early fall. The largest of these, from an inch to an inch and a half in length, appear in early summer. The borer gets its living just beneath the bark of the tree at the crown, and a mass of gum on the bark is the telltale sign which indicates the presence of borers.

When the eggs—of which an individual moth sometimes lays five or six hundred—hatch, the borers are scarcely one-sixteenth of an inch long. It is thought that not ten per cent of these borers live long enough to enter the tree, and this is doubly fortunate, as there seem to be practically no natural enemies of the borer. The borer never transforms into an adult the first season, and the grubs in the second, third, and fourth stages lie dormant during the winter.

The borers are found in New Jersey wherever peach trees grow, and they attack cherry and plum to some extent.

No insecticide application is known which is certain to exterminate these borers. Frequent applications of hot water not over 175 degrees will sometimes free the trees of them, when present in small numbers, if the gum is first removed. What is needed is a careful examination of the trees twice a year, late in the fall and in May or early June, removing all gum, and cutting into cavities to find and destroy borers. Dr. Smith has the following to say in regard to spraying directly after the spring examination, in order to prevent any young larvae getting into the trees later:

(Continued on page 230)

ORCHARD ENEMIES

BLACK-KNOT

A fungus, the spores of which are carried from tree to tree by the wind and thus spread the infection, is the cause of this disease. The same fungus also affects plums. Cut out and burn all knots before leaves appear in the spring. See that the knots are removed from all plum and cherry trees in the neighborhood. Cornell Bulletin 81.

BLACK-ROT

This is the most destructive fungous disease of grapes in this state. It is carried over from one season to the next chiefly in old rotted berries or "mummies" that fall to the ground or cling to the vines. Remove all mummies that cling to the arms at trimming time. Plow early, turning under all mummies and diseased leaves. Rake all refuse under the vine into the last furrow and cover with the grape hoe. This cannot be too thoroughly done. The disease is favored by wet weather and weeds or grass in the vineyard. Use surface cultivation and keep down all weeds and grass. Keep the vines well sprouted; if necessary, sprout twice. Spray with Bordeaux mixture, 4-4-50, until middle of July, after that with ammoniacal copper carbonate. The number of sprayings will vary with the season. Make the first application when the third leaf shows. Infections take place with each rain, and occur throughout the growing season. The foliage should be protected by a coating of the spray *before* every rain. The new growth, especially, should be well sprayed. When the foliage becomes dense the clusters should be sprayed with a "trailer" or hand spraying device. Four applications of Bordeaux mixture should be made. In exceptionally wet seasons two applications of ammoniacal copper carbonate will be necessary. Apply 50 to 60 gallons of spray to the acre. Use 100 to 140 lbs. pressure; use a 1-16 inch hole in the disk of the nozzle. (Cornell Bulletins 254 and 266.)

BROWN-ROT

This is the most serious fungous disease of stone fruits in this state and one of the most difficult to control. Plant resistant varieties. Prune the trees so as to let in sunlight and air. Thin the fruit well. Spray with self-boiled lime-sulfur, 8-8-50, to which add 2 lbs. arsenate of lead to 50 gallons. Spray first about time shucks are shedding from young fruit; second, 2 to 3 weeks after first, using same combinations as for first; third, about one month before fruit ripens, with self-boiled lime-sulfur, 8-8-50, omitting the poison. U. S. D. A. Bureau of Entomology, Circular 120 p. 6-7.

FIRE-BLIGHT

This is the same as fire-blight of apple, but it is more destructive to pears. It kills the twigs and branches, on which the leaves suddenly blacken and die, but do not fall. It also produces cankers on the trunk and large limbs. Prune out blighted branches as soon as discovered, cutting 6 to 8 inches below the lowest evidences of the disease. Disinfect with corrosive sublimate solution, 1 to 1000.

Clean out limb and body cankers as described for fire-blight on apple trees. Disinfect all large wounds and cover with coat of paint or gas tar. Cornell Bulletin 272. Plant the varieties least affected.

PEAR PSYLLA

These minute, yellowish, flat-bodied, sucking insects are often found working in the axils of the leaves and fruit early in the season. They develop into minute, cicada-like jumping-lice. The young psyllas secrete a large quantity of honey-dew in which a peculiar black fungus grows, giving the bark a characteristic sooty appearance. There may be four broods annually and the trees are often seriously injured. After the blossoms fall, spray with kerosene emulsion, diluted with 6 parts of water, or whale-oil soap, 1 lb. in 4 or 5 gals. of water, or with one of the tobacco extracts. Repeat the application at intervals of 3 to 7 days until the insects are under control. Cornell Bulletin 108.

(Continued on page 221)

SPRAYING MIXTURES

In the Popular Edition of Bulletins Nos. 319 and 320 of the New York Agricultural Experiment Station, Geneva, N. Y., by L. L. Van Slyke and P. J. Parrott, the harmfulness of magnesian lime in the composition and use of lime-sulphur washes is shown by the following:

"It is believed that the inferiority of these field-made mixtures is due to the presence of magnesium oxide in the lime used; for other laboratory tests have shown that the magnesium compounds in the presence of boiling water decompose the higher sulphur-lime compounds, set some of the sulphur free entirely, throwing it into the sediment, while more of the sulphur combines with hydrogen from the water and forms the foul-smelling gas, sulphuretted hydrogen. The odor of this gas is noticeable wherever the sulphur-lime mixtures are being made from magnesian limes, and often in orchards where such mixtures are used. This gas is not only disagreeable, but to some extent poisonous, causing loss of appetite and nausea.

In the laboratory the use of magnesium oxide instead of calcium oxide with sulphur in the effort to make the spraying mixture resulted in a complete failure. Practically none of the sulphur became soluble, but quite a little escaped in form of gas. When a quantity of magnesium oxide was added to a quantity of a standard spray mixture made by diluting one of the laboratory-made concentrates, the odor of sulphuretted hydrogen was immediately noticed. After allowing the mixture to stand, it was analyzed. The soluble sulphides were found to have decreased from 9.70 lbs. in 50 gallons to 8.65 lbs., a loss of more than one tenth; while the free sulphur had increased from nothing to nearly half a pound. Perhaps the most important lesson taught by this series of studies is that impure lime should be avoided in making sulphur washes, especially magnesian lime, since the magnesium oxide is worse than useless,—is a positive detriment.

Have you made arrangements to head for St. Louis June 12 or 13?

NEW YORK CENTRAL LINES PATRONIZED BY EAST-ERN NURSERYMEN ATTENDING MEETING OF AMERICAN ASSOCIATION OF NURSERYMEN, ST. LOUIS, JUNE 14-16, 1911

For some time past, Mr. C. L. Yates, in conjunction with the active and energetic Secretary of the American Association of Nurserymen, Mr. John Hall of Rochester, has been canvassing the subject of routes from Rochester and other points in New York, as well as New England, to St. Louis, in view of the forthcoming annual convention of the American Association of Nurserymen. Mr. Yates has considered carefully the advantages and disadvantages offered by various transportation lines, and has decided in favor of the New York Central lines, which provide through sleepers from Rochester, and through connections from other points in New York and New England, to St. Louis. According to present arrangements special sleepers will start from Rochester on the 12th, headed for St. Louis, running over the New York Central, the Lake Shore and Michigan Southern, and the Big Four Route. This route will take nurserymen through the important fruit region of Western New York, including the great Chautauqua grape belt, the Pennsylvania grape belt, and important fruit sections in Ohio.

The fact that the train will be run by the New York Central Lines, is sufficient warranty that excellent service will be given, and that a comfortable trip will be insured. The Nurserymen of Western New York have already had agreeable experience with these lines in attending the meetings of the Association at Detroit, Denver, and Dallas, Texas. The General Agent of the New York Central Lines at Rochester, Mr. J. B. Martin is taking special pains to see that everything possible is done for the comfort and pleasure of the passengers who undertake this trip. Full information can be obtained from Treasurer, C. L. Yates, Livingston Building, Rochester, N. Y.

SCHEDULE OF THE AMERICAN PEONY SOCIETY, FOR THE EXHIBITION OF 1911

HORTICULTURAL HALL, PENN. HORTICULTURAL SOCIETY,
BROAD ST., PHILADELPHIA, JUNE 14-16

COMMERCIAL CLASSES

1. Largest and best collection of named varieties, one flower of each. Offered by American Peony Society \$25.00 \$15.00
2. Best fifty blooms, one variety, named, white, two prizes. Offered by B. H. Farr, Reading, Pa 10.00 5.00
3. Best fifty blooms, one variety, named, dark pink or rose, two prizes. Offered by Andorra Nurseries, Chestnut Hill, Pa 10.00 5.00
4. Best fifty blooms, one variety, named, flesh or salmon-pink, two prizes. Offered by Cottage Gardens Co., Queens, N. Y. 10.00 5.00
5. Best fifty blooms, one variety, named, crimson, two prizes. Offered by Thos. Meehan & Sons, Germantown, Pa 10.00 5.00

AMATEUR CLASSES

6. Open to amateurs and private gardeners only. Largest and best collection of not less than twenty-five varieties, named, one of each variety, two prizes. Offered by T. A. Have-meyer \$15.00 \$10.00
7. Best collection of not less than twelve varieties, named, one of each variety, open only to exhibitors not residing within 100 miles of Philadelphia, two prizes. Offered by Henry A. Dreer, Inc., Phila 10.00 5.00
8. Best collection of white varieties, named, one bloom each, two prizes. Offered by W. Atlee Burpee Co., Phila 6.00 4.00
9. Best collection of dark pink or rose varieties, named, one bloom of each, two prizes. Offered by Robt. Scott & Sons, Sharon Hill, Pa 6.00 4.00
10. Best collection of salmon and flesh pink varieties, named, one bloom of each, two prizes. Offered by Thos. Meehan & Sons, Germantown, Pa 6.00 4.00
11. Best collection of tricolor varieties, named, one bloom each, two prizes. Offered by Peter Henderson Co., New York 6.00 4.00
12. Best collection of Crimson varieties, named, one bloom each, two prizes. Offered by Geo. H. Peterson, Fairlawn, N. J 6.00 4.00
13. Best six blooms of any one variety, named, two prizes. Offered by W. W. Kline, Reading, Pa 6.00 4.00

OPEN CLASSES

14. Best six blooms of Duchess de Nemours. Offered by F. H. Wild Floral Co., Sarcoxie, Mo. \$2.50
15. Best vase of twenty-five Peonies of one variety. Offered by Henry F. Michell Co., Phila 5.00
16. Best twelve pink varieties, six blooms each. Offered by S. G. Harris, Tarrytown, N. Y. 5.00
17. Best collection of Japanese varieties, one bloom each. Offered by Henry F. Michell Co., Phila 5.00
18. Best New American Seedling Peony, not in commerce previous to 1908, name of originator to be given. Offered by Andorra Nurseries, Chestnut Hill, Pa. 10.00

SHOW COMMITTEE—Chairman, B. H. Farr, Reading, Pa.; J. H. Humphreys, Andorra Nurseries; S. Mendelson Meehan, Germantown, Pa.; C. Sim care Henry A. Dreer, Riverton, N. J.; J. J. Steyer, Concordville, Pa.

USEFUL KNOWLEDGE

ENGLISH FORMULAS FOR MAKING CEMENTS

A. Plaster of Paris mixed with water and a cold solution of alum is a good cement for stoneware, sets slowly and becomes quite hard.

B. A lime cement for connecting water pipes, baths, etc., is made by mixing two-thirds fine brick dust, two-thirds unslaked lime, and two-thirds hammer-slag together, and afterwards stirring up with lye or hot oil to a stiff dough.

C. For closing the joints of stoves and boilers a useful cement can be made by mixing two parts fine coal ashes with one part common salt. Add sufficient water to form a paste and apply immediately.

Iron Cements.—Take 24 lbs. iron filings or borings, 4 oz. sal ammoniac, and 2 oz. of sulphur. The filings are rapidly oxidised, and the escape of carbonic acid increases the volume of the cement and completely fills the crevices.

Take 15 parts iron filings, 5 parts clay, and 1 part salt, add vinegar, and stir to form a magma. Will stand heat.

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Correspondence from all points and articles of interest to nurserymen and horticulturists are cordially solicited.

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AMERICAN ASSOCIATION OF NURSERYMEN.

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TARIFF—Irving Rouse, Rochester, N. Y.

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LEGISLATION WEST OF MISSISSIPPI RIVER—Peter Youngers, Geneva, Nebr.

CO-OPERATION WITH ENTOMOLOGISTS—J. W. Hill, Des Moines, Ia.

PROGRAM—J. H. Dayton, Painesville, O.

PUBLICITY—Orlando Harrison, Berlin, Md.

EXHIBITS—J. W. Schuette, 5600 Gravois Ave., St. Louis, Mo.

ARRANGEMENTS—John Hall, Rochester, N. Y.; J. H. Dayton, Painesville, O.

F. A. Weber, Nursery, Mo.

EDITING REPORT—John Hall, Rochester, N. Y.; Prof. John Craig, Ithaca, N. Y.

ENTERTAINMENT—F. A. Weber, Nursery, Mo.

FORESTRY—A. J. Brown, Geneva, Nebr.

CO-OPERATION WITH FRUIT GROWERS AND ASSOCIATIONS—J. M. Irvine, St. Joseph, Mo.

TRADE OPPORTUNITIES—Jefferson Thomas, Harrisburg, Pa.

NURSERYMEN'S SHARE IN CIVIC IMPROVEMENT—J. Horace McFarland, Harrisburg, Pa.

ROOT-KNOT—E. A. Smith, Lake City, Minn.

MEMBERSHIP—John Watson, Newark, N. Y.

STATE AND DISTRICT ASSOCIATIONS.

American Nurserymen's Protective Association—President, R. C. Berckman, Augusta, Ga.; secretary, Thomas B. Meehan, Dreshertown, Pa. Meets annually in June.

American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.

Association of Oklahoma Nurserymen—President, J. A. Lopeman, Enid, Okla. Terr.; secretary, C. E. Garee, Noble, Okla. Terr.

Canadian Association of Nurserymen—President—E. D. Smith, Winona; secretary, C. C. R. Morden, Niagara Falls, Ont.

Connecticut Nurserymen's Association—President, C. W. Atwater, Collinsville, Conn. Secretary, John S. Barnes, Yalesville, Conn.

Eastern Association of Nurserymen—President, Wm. Pitkin, Rochester, N. Y.; secretary-treasurer, William Pitkin, Rochester, N. Y. Meets annually in January.

National Association of Retail Nurserymen—President, Wm. Pitkin, Rochester, N. Y. secretary, F. E. Grover, Rochester, N. Y.

National Nurserymen's Association of Ohio—President, J. W. McNary, Dayton, O. secretary, W. B. Cole, Painesville, O.

Pacific Coast Association of Nurserymen—President, Geo. C. Roeding, Fresno, Cal.; secretary-treasurer, C. A. Tonneson, Tacoma, Wash. Meets annually in June.

Pennsylvania Nurserymen's Association—President, Samuel C. Moon, Pa., secretary, Earl Peters, Mt. Holy Springs, Pa.

Southern Nurserymen's Association—President, R C Berckmans, Augusta, Ga. secretary-treasurer, A. I. Smith, Knoxville, Tenn.

Tennessee Nurserymen's Association—President, A. I. Smith, Knoxville, Tenn.; secretary, G. M. Bentley, Knoxville, Tenn.

Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.

Western Association of Nurserymen—President, E. P. Bernardin, Parson, Kans. secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City

THE ANNUAL CONVENTION

The time for the annual gathering of the clans has again arrived. When this paragraph reaches the eye of the reader, the St. Louis meeting will be less than two weeks distant. Are you planning to be there? The officers and chairmen of committees have been working hard for the usual exchange of fact and experience. As in the past, members may be assured of a profitable meeting from the standpoint of program subject matter. They may be certain also that entertainment adapted to the varying requirements of the company will be provided. Don't imagine that St. Louis is going to be the coolest place in the United States at that time; neither will it be the hottest. On the other hand, count on all creature comforts available anywhere and come prepared to assist in making the meeting the most profitable and enjoyable up to date. Each gathering of the Association makes a new record. We have no doubt that such will be the case at St. Louis.

TOP WORKING THE KIEFFER PEAR

Notwithstanding the gibes and ridicule directed at the notorious variety, Kieffer, there are many places in the country where it can be still continued in favor because grown with profit. In our judgment this is simply an example of the law of adaptation. Those regions to which the variety is not naturally adapted will be eliminated from the contest. Those regions where it is productive and where the climatic conditions are such that its highest qualities are approximated will continue to grow Kieffers for the canning and cheaper consuming trades.

One of the interesting questions to growers who are outside of the Kieffer zone is, what to do with established orchards. In the early history of our experience with this variety the feeling was prevalent that when it became unprofitable it could be easily worked over to varieties which the market would handle. Later experience indicates that the problem is not as easy as it seemed and experience is filtering in from the rank and file of the fruit growers that there are few varieties, except those derived from the Oriental hybrids, which have a proper affinity for the Kieffer stock.

One of the troubles is that blight seems to be encouraged where the Kieffer is used as a stock. Several instances of this kind are recorded. In the Canadian Niagara district the Anjou has been worked on Kieffer, but in almost every case, if not in every instance, the Anjou has blighted badly. At a recent meeting of the Ontario Fruit Growers' Association one orchardist cited his experience in top working sixteen acres of Kieffer with Bosc, with the result that his Bosc blighted so badly as to practically destroy this block of trees. Again, that noted authority, J. R. Cornell of Newburg, goes on record as saying his experience leads him to believe that it is an undesirable and unsafe stock to use. On the whole, therefore, the outlook for the Kieffer as a stock is not promising. The NATIONAL NURSERYMAN will be grateful for any items of experience on this general topic which our readers may care to send us.

YOUNGER NURSERY STOCK BEING PLANTED

It is very interesting to observe the change which has been taking place in reference to the age of nursery stock used in orchard planting. Twenty-five years ago a three-year apple formed the demand which ruled widely and generally.

The same age ruled in the case of the pear and the plum. With the peach two-year old trees were set, but with the others, the tendency was all towards the older grades.

During the past ten years as orcharding has become more distinctly commercial, a decided change has taken place and the three-year old tree is the marked exception, while the one-year old tree in the stone fruits and the pear is the ruling demand. This is partly due to the fact that nurserymen now grow better trees than they formerly did, they being larger at one-year old than they were formerly at two-years old. Then again, it has been learned that there is little gained in using the larger stock. The orchardist is taking a larger share in the heading of his trees and to this end he begins their training at an earlier age. This practice is sometimes carried to an extreme, as in the case of using June buds in planting peaches, but on the whole the tendency is making for progress in fruit growing.

THE PASSING OF THE AMERI- CAN CHESTNUT

Attention has been called in these columns to the disease which is destroying the American Chestnut so rapidly in the North Eastern part of the United States. So severe has the attack been in Long Island and parts of New England that the Chestnut hillsides present a blighted and blasted appearance. In the immediate vicinity of New York City there has been an exceptionally severe attack.

The U. S. Department of Agriculture has issued under No. 141, Part V, a bulletin on this subject. The bulletin summarizes the salient features of the life history of the disease. It appears to be of comparatively late appearance. The first observation dates not further back than 1904. One of the peculiarities about the disease is that it attacks only the Chestnut and its closely allied arborescent form, the Chinquapin.

The life history of the disease is briefly as follows: Like most fungi the spores find entrance to the tree through wound or cracks in the bark. The leaves and green twigs are not immediately affected. The area involved is the growing inner bark. From the point of infection the disease spreads rapidly until the trunk of the tree is girdled. When this occurs the markedly diseased condition is apparent and death soon follows. The external appearance of the disease is marked by sunken patches of bark, more or less covered with pustules varying in color from yellow, through orange to reddish brown. The diseased area will often spread sufficiently rapid to girdle a tree in one summer although it ordinarily takes two years to complete the destruction of a healthy specimen. The technical name of this parasite is *Diaporthe parasitica* Murrill.

Owing to the nature of the disease, the fact that it grows largely beneath the bark, and in consideration of the

character and distribution of the host plant, no practical spraying remedy is feasible. Experiments have been conducted by the Division of Forest Pathology of the Bureau of Forestry without any definite conclusions thus far. The only recommendations offered are to inspect nursery stock with the utmost scrutiny so that all diseased trees may be rejected and destroyed, and the prompt destruction of trees in parks or wooded lots as the disease manifests itself.

INDIVIDUALITY OF APPLE TREES

The horticulturist of the Canadian Experimental Farms at Ottawa has recently reported on the results of a comparative study of the productiveness of different individuals of the same variety of apple trees, covering a period of 10 years. These studies show very interesting findings. For instance, in the case of Wealthy, one tree in a group of 17, yielded practically five times as many apples as the poorest and nearly twice as many as the average yield of the whole lot. Five trees out of 17 were notably productive, while 12 were relatively unproductive.

In the case of McMahan White there was equally great variation. One tree in 11 years yielded 94 bushels, while another only yielded 20 bushels. No other tree yielded more than 75 bushels for the period, while the average was considerably lower. In this instance 8 trees were compared.

The yields of 2 trees of McIntosh were also compared during a period of 10 years, and one produced a little over twice as much as the other during that time. Another variety, Patten Greening, showed equal variation. One tree yielded 63 bushels in 11 years, while another tree yielded less than 30 bushels, and the average was something like 40 bushels.

All this points to the possibility of improving the productivity of our fruits by growing from selected strains.

ORCHARD ENEMIES

(Continued from page 218)

CODLING-MOTH

This is the pinkish caterpillar which causes a large proportion of wormy apples. The eggs are laid by a small moth on the leaves and skin of the fruit. Most of the caterpillars enter the apple at the blossom end. When the petals fall the calyx is open, and this is the time to spray. The calyx soon closes and keeps the poison inside ready for the young caterpillar's first meal. After the calyx has closed, it is too late to spray effectively. The caterpillars become full grown in July and August, leave the fruit, crawl down on the trunk, and there most of them spin cocoons under the loose bark. In most parts of the country there are two broods annually.

Immediately after the blossoms fall, spray with 1 lb. Paris green or 4 lbs. arsenate of lead in 100 gals. of water. Repeat the application about 3 weeks later. For use with Bordeaux and lime-sulfur see APPLE SCAB. Use burlap bands on trunks, killing all caterpillars under them every ten days from July 1st to August 1st, and once later before winter. Cornell Bulletin 142.

OBSERVATIONS MADE ON A WINTER TOUR IN SOUTH AMERICA

Mr. J. McHutchison, of McHutchison & Co., Importers of New York, has recently returned from an interesting ten weeks' trip through the South American Republics. Mr. McHutchison was requested by the New York Florists' Club to give an account of his wanderings, and did so at a recent meeting. We are unable to include the entire story of his trip, which was most interesting, but present the following extracts from the address.

The trip I took was a ten weeks' cruise in the Hamburg-American Line Steamer *Blucher*. There were 214 of us in the party—mostly widows and batchelors—and they had about every convenience on board except a matrimonial agency. January 21st, the day we left New York, was an unhappy mixture of fog, rain, and cold. Three days later overcoats were discarded, light clothes brought out, and we were looking over the rail at the flying fishes.

Six days after leaving New York we were in Barbados, called sometimes "Little England," in British West Indies. We had been passing the Caribbean Islands the whole day previously, though it was too dark to see Martinique, where Mt. Pelee destroyed the city of St. Pierre and did so much damage a few years ago. Barbados is beautiful. Ninety per cent of the people are black. It is the most densely populated place on earth—200,000 inhabitants in an area of 166 square miles. We drove through avenues lined with cocoanut palms and mahogany trees with the flaming hibiscus, blue plumago and bougainvillea brightening up the roadside gardens. The principal products are sugar cane, cotton, tobacco, and so forth.

We crossed the equator on January 31st with appropriate ceremonies. The ship's crew were dressed up in fanciful costumes, and the men passengers and crew who had not crossed the line before were lathered with a whitewash brush, shaved with a two-foot razor, imaginary teeth were pulled, and salt water pills were given to them; they were then smothered with toilet powder, and thrown over backwards into a five-foot salt water tank, finally escaping through a canvas tube with a two-inch stream of water on his rear to facilitate his passage.

[SAN PAULI

From Santos we went to San Pauli. How many North Americans ever heard of San Pauli? Yet it is the cradle of Brazilian independence and the most modern city in Brazil, with a population of 400,000, with broad tree-lined avenues, monumental public buildings, and handsome residences. Their open trolley cars were made from St. Louis models. The avenues are in most instances lined with coffee trees, the Australian silky oak, and the beautiful Jacaranda *Mimosafolia*, which grows with us in Southern California. The Municipal Opera House there is a beautiful building—built and owned by the city. It cost about 8,000,000 United States dollars, and is, I think, finer than the famous Paris Opera House.

I ought not to pass here without mentioning the San Pauli Railroad which covers the sixty miles between Santos and San Pauli, climbing 3600 feet up the face of the mountains. I never saw a railroad like it. It is mostly tunnels and viaducts, and there isn't a square foot that is not waterproofed; and that is something when you consider that the average rainfall is eleven feet per year, and ten inches of water has fallen in twenty-four hours. The railroad was built and is owned by the British, and English rolling stock is used. Its profits are over 40 per cent a year, but Brazilian laws prevent more than 7 per cent being paid in dividends, so all surplus goes into unnecessarily fine stations and improvements.

VALPARAISO

This is a cosmopolitan city and the principal seaport of Chile. Its population increased 100 per cent within the last two years, while New York gained only 48 per cent. There are still some evidences of the earthquake that visited them a few years ago. Chile is called the shoe-string republic, because it has a coast line of 2600 miles and an average width of only 150 miles. Santiago is its capital city. Like all South American cities, it is made as a fit place to live in. Too bad our cities are not built on the same principle. In Santiago and Valparaiso the street car conductors are mostly women. Santiago is built on a plain surrounded by mountains. Right in the center of the city is a rocky mountain called Santa Lucia. It has been landscaped and beautified with statues and hanging gardens. From the top at sunset, we get a fine view of the pinnacled, snowclad peaks of the Andes with the sun shining on them after the city is in darkness. It has not rained in Chile for two years, though the Aconagua Valley beats anything for productiveness I ever saw, not even excepting the Campagna in Italy.

The famous Trans-Andean Railroad is a marvel of constructive engineering. It runs from Valparaiso, Chile, to Buenos Ayres, and we crossed it from end to end. Its mountain scenery is grand, and we pass at the foot of Mt. Aconagua, 23,200 feet, which makes it the highest mountain in the Western Hemisphere. Still I do not think that the scenery from the train is any finer than in many parts of Switzerland or over the Canadian Rockies on the C. P. R. R.

By going under the central peaks of the Andes in the tunnel, we pass under the boundary line between Chile and the Argentine. You will remember that a few years ago these two countries were on the verge of war, but a settlement was reached by King Edward's arbitration. The two countries then built a monumental statue of Christ, "The Christ of the Andes," and placed it in the pass, right on the boundary line amid the everlasting snows, and on the tablet is this beautiful inscription: "Sooner shall these mountains crumble into dust than the people of Argentine and Chile break the peace which they have sworn to

maintain at the feet of Christ the Redeemer;" and let me tell you, gentlemen, that those two nations will never fight while that statue stands there.

It takes from daylight to dark to cross the Andes from Los Andes to Mendoza, which is all made on narrow gauge; then all night and all the next day we cross the pampas of the Argentine, as level as a billiard table, and not a hill and very few trees in sight for 600 miles; but there are cattle, horses, sheep, and ostriches on both sides of the track, and thousands of scarlet flamingoes in the water. I never saw so many cattle before. In one place the track runs along for 175 miles without a curve. What a contrast after crossing the Andes!

Buenos Ayres, meaning "Good Airs," is a modern city of 1,400,000 people. In beautiful parks, boulevards, and plazas it surpasses both Paris and Berlin. The climate is warm and pleasant, and in the afternoons the business men drive through the beautiful gardens and boulevards in Spanish style; for the language and life of the people is Spanish. It would take me an hour to tell you much about this fine city. Its avenues, plazas and boulevards are not duplicated in the United States. Their Capitol building is finer than ours in Washington. Their custom house is finer than our New York one. We went through the famous newspaper office, La Prensa. In the parks they have whole avenues lined with forty-foot palms. I saw specimens of Phoenix Canariensis as high and broad as a five-story building and furnished to the ground. Everything has the appearance of newness in their bright sunshine; even their famous Avenue Mayo is only four years old, lined with buildings of uniform height and architecture. Their four miles of splendid docks have been reclaimed from the Rio de la Plata and are always filled with numbers of large steamers flying the flag of every maritime nation—except the stars and stripes.

The Botanical Gardens of Rio are famed the world over and rightly so, too. I spent nearly a whole day there. One avenue of royal palms dividing the gardens is half a mile long. There are avenues twenty feet wide so embowered with bamboos that not sufficient light gets into them to take a photograph. Other avenues are lined with Areca Lutescens and all kinds of tropical plants; for there are over 800 varieties there. What beautiful places these South Americans have to spend afternoons or Sundays with their children! Most of the consulates are at Petropolis, about forty miles up in the mountains from Rio. The United States Consulate there is almost as good a building as the Portuguese, which is more than can be said of some places.

We felt like millionaires in Brazil. Their language is Portuguese and they use Portuguese money of Reis and mil-reis. A million reis amounts to about \$260 in our money. Trolley fares or a post card costs 400 reis and 1000 reis is an ordinary tip for a waiter. All through South America they have a pleasant way of naming their streets and parks after some historical event. It is just as if Broadway were called Fourth of July Street.

All of the South American cities are fine places to live in. They are made beautiful. A city like Buenos Ayres or Rio,

for instance, has more acreage in parks and gardens than five cities of the same size in the United States; and they are fine parks too, not open squares of grass dead half the year. They plant good trees and fine palms—not the common varieties, but varieties like Cycas Circinalis, Phoenicophorum Sechellarium, Licuala Grandis, and Phoenix Rupicola, in magnificent specimens; and they keep them in fine shape too, so that a drive or walk through these parks is a refreshing diversion after a day's work.

We always think of Brazil as having a very hot climate. True, the average is high, but it never gets really hot. The maximum temperature of Para, only eleven miles south of the equator is only 78 degrees. We get it hotter than that right in New York City sometimes, and they get it in Buenos Ayres too. On the entire trip we were never bothered with mosquitoes, and there are so few flies that even in the hottest cities meat is hung outside without protection. The cities down there are nearly all progressive and up to date.

The growth and prosperity of the South American republic has been amazing within the past two or three decades. Englishmen and Germans of intelligence and business or mechanical ability control the commercial, shipping, and engineering enterprises of South America. North America is represented only in a few isolated places. Every railroad in the Argentine, with one exception, was financed and built by Englishmen and is now officered by them. The public water works of Buenos Ayres were built and are run by Englishmen. In the year 1909, Englishmen took 250 million of dollars in dividends out of the Argentine alone. The docks at Santos and at Rio, also the wonderful Trans-Andean Railroad, which runs across the continent from Buenos Ayres to Valparaiso, more than 800 miles over and through the Andes, are owned in England. The engines and rolling stock on the Chilean railroads and most of their trolley systems were installed by the Germans. Even their soldiers all wear German uniforms. There are over 40,000 English residents in the Argentine, and only 400 Americans. The banks, docks, and railroads are controlled by the English or Germans, and we as a nation are hardly known there; and why should we be? They see large ten and twelve thousand ton British, German, and Italian steamers entering their ports, but never an American one. Why, the American Consul at Santos told me that last year 393 large steamers left their port laden with Brazilian products, but a steamer flying the American flag had not been in there in ten years. No wonder that the United States has had little share in the thriving prosperity of the wealthy regions of the equator.

So long as the banking laws of the United States forbids any branch or succursal of American banks in South America, and so long as we have no ships of our own and prevent foreign ships from trading from one American port to another en route to South America, the Monroe doctrine will appear a farce to South American republics, and their trade will go to European houses who know how to handle it. The citizen of the North, be he manufacturer or exporter, has little hold upon the South American market. He does not seem to understand the situation.

ORCHARD COVER CROPS

Their Importance and Use in Orchard Management

J. G. MOORE, Wisconsin

The time at which cultivation shall cease and the cover crop be sown is very largely a matter of judgment. It depends almost entirely upon what soil moisture conditions are during the latter part of July, and what they are likely to be during the remainder of the season. One of the chief objects of the cover crop, says Mr. Moore in a recent bulletin of the Wisconsin Experiment Station, is to assist in controlling the moisture content of the soil during late summer and early fall. If there are large amounts of moisture in the soil during this period, there is danger of new wood development continuing so long that it goes into winter only partially matured, and is very likely to winter kill. On the other hand, reducing the quantity of moisture in the soil tends to hasten maturity, and avoid unfavorable conditions.

It will be seen then that in a season in which there is heavy rainfall or probability of heavy rainfall during August and September, that a rapidly growing cover crop becomes

an effective means of reducing the moisture content of the soil. In seasons of drought, the cover crop will make proportionately less growth and not prove injurious to the trees. In wet seasons the cover crop should be sown comparatively early; in dry seasons, rather later sowing is best. As a usual thing it is sown between July 15 and August 1. In a season of drought during the early part of the season the probabilities of late growth are quite as great as when June and July have been rainy months. It is well, therefore, to have the seed in the ground ready to begin growth as soon as soil moisture conditions will permit. During the summer of 1910, the cover crop in the station orchard was sown about August 1, but owing to continued drought, made practically no growth until after the first good rain which occurred on August 15.

Another important function of the cover crop is to add vegetable matter to the soil. Without the cover crop the orchard soil would soon become depleted of its vegetable matter which would destroy its tilth and make the plant food much less readily available, unless considerable

quantities of barnyard manure are applied. An ideal cover crop then should produce considerable vegetable matter. In order to do this the importance of having it ready to begin growth following a drouth in July or August is apparent. Rapid growing crops are usually preferable to slow growers although at times for special purposes the slow growing crop may be more advantageous.

COVER CROPS AS PLANT FOOD SUPPLIERS

Cover crops may be made to serve the purpose of increasing plant food in the soil. Not all crops used for

covers are able to do this. Only leguminous crops such as clover, peas, and vetch are capable of adding plant food, and these only nitrogen. The leguminous cover crops, however, are a valuable asset in keeping up the fertility of the orchard. If used too continuously it may prove detrimental, for excessive nitrogen tends to cause excessive wood



Millions of Grape Cuttings. Stark Brothers Company.

growth at the expense of fruit production. It also favors late growth, and in this way may result in considerable winter top-killing. Because of these unfavorable conditions which are likely to arise, it is a good plan to practice rotation of cover crops using leguminous crops on average soils, not more than two out of three successive years.

HARDY AND NON-HARDY COVER CROPS

In addition to being divided into food-supplying and non-food-supplying, cover crops are also classified as hardy and non-hardy or tender crops. The hardy crops live over winter and make some growth in the spring, thus increasing the vegetable matter returned to the soil. They may or may not be efficient in holding the snow or preventing deep freezing. Hairy vetch, although a hardy crop, is usually less efficient in these respects than is oats, which is non-hardy, but which stands up well after frost.

In the food-supplying, hardy group of cover crops are hairy vetch and crimson clover, the latter of which can only be considered half hardy in Wisconsin. Of the tender



One-year Grapes. Stark Bros.

food-suppliers, we have field peas and soy beans. Of the hardy non-food-supplying class, the most important is rye, but wheat is occasionally used. The increased cost of the seed, and the fact that the character of its growth is much the same as rye, makes the latter more in favor.

Of the non-food-supplying tender crops, oats, millet, turnips and rutabagas are the most used. The two latter

might be placed in a class by themselves due to the fact that they have tender tops which kill back with the frost, but roots which live over winter and produce growth the following season. It is not necessary that each crop be grown alone, frequently two or more are grown in combination. Probably the most used combination is that of oats and Canada field peas.

Some of the chief advantages and disadvantages of the various plants mentioned above, in their use as cover crops are:

Hairy vetch is especially hardy; makes a rapid growth in spring; is slow to catch in a dry season; makes slow growth in fall; is low and does not hold snow as well as some of the other crops.

Crimson clover can only be recommended in certain localities, owing to the fact that it winter kills. Where it is hardy it makes a very good cover if a catch can be secured.

Field peas are one of the best food-supplying crops; make a heavy growth; are especially valuable when mixed with some other crop which provides support.

Soy beans are more tender than field peas, but stand up better after frost.

Rye is the best non-food-supplying hardy cover; does not make as much growth as oats in the fall, but stands up somewhat better during the winter.

Oats is probably the most used of all covers; comes quickly when sown, makes a good growth, stands up fairly well during the winter. Barley possesses about the same merit.

Millet is similar to oats, but less hardy and does not stand up as well. Turnips and rutabagas add considerable vegetable matter, but lack the essential qualities necessary

for holding snow; especially valuable for rendering available phosphoric acid.

AMOUNT OF SEED FOR COVER CROPS

The amount of seed to be sown for the various crops is practically the same as that in ordinary field culture. It is better to err on the side of having the cover too thick rather than too thin. There is little danger on the side of the former, save in the expense of seed, as the denser the growth, the better it stands up, and therefore the better it holds snow.

The following amounts may be considered as indicating the quantity of seed to be used per acre:

Hairy vetch, 1 bushel; crimson clover, 15 pounds; field peas, 2 bushels; soy beans, 3 to 4 pecks; rye, 1 to 1½ bushels; oats, 1½ to 2½ bushels; millet, 6 pecks; turnips and rutabagas, 4 pounds.

It is well to harrow the ground just before sowing, and to put in the crop exactly the same as for field conditions.

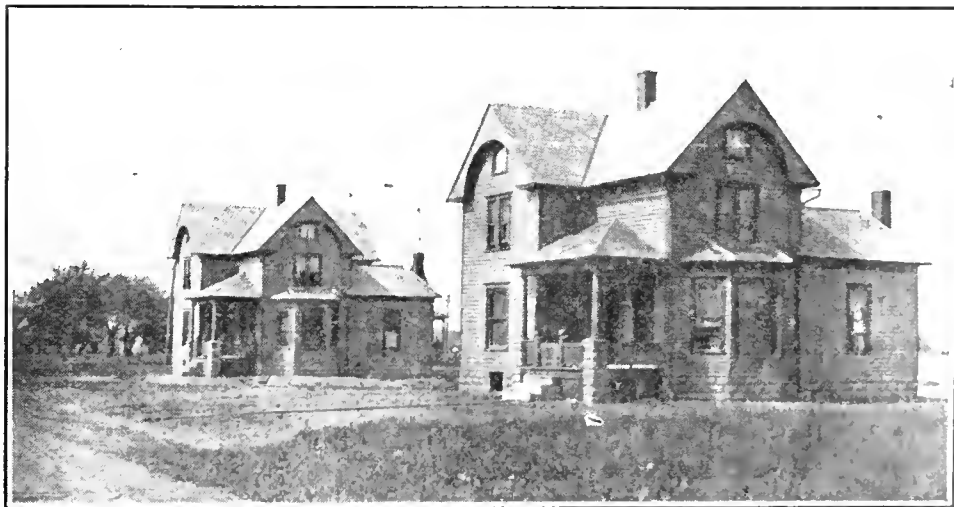
Once in the ground, the crop needs no further attention until time for cultivation the next spring, when it is to be plowed under and the system of clean culture again taken up.

Occasionally an orchardist stops cultivating at the proper time, and allows nature to provide him with a cover crop in the form of weeds. It would hardly seem necessary to advance any argument against such a procedure. The growing of weeds as a cover crop simply means

that the labor expended in eradicating them will in time more than offset the cost of using a legitimate cover.



Details in the Planting of Cuttings. Stark Brothers Company.



Homes of Employees on Stark Bros.'s Plant, North Girard, Pa.

Some may say that the season of growth will be too short for the weeds to ripen seed. If this be true, it will only be a short time until those weeds which produce the cover are those which have a short season and ripen seeds early, for

unless this be so, the weed cover crop must in a short time lose its source of seeding and become a thing of the past. At the very best, a cover crop of weeds is an uncertain thing.

"We like your paper very much."

BEVERLY NURSERY AND OR. CO., Ohio

Henry Kallen representing Kallen & Lunnemann, wholesale growers and exporters of High Grade Nursery stock. Boskoop.

J. Dykhuis representing Felix & Dykhuis. Boskoop, Holland.

fruit and plant Notes

POLLINATION STUDIES IN DEPARTMENT OF HORTICULTURE OF THE OREGON AGRICULTURAL COLLEGE

In an interesting article on this subject in the May issue of *Better Fruit* Prof. C. I. Lewis of Corvallis says that in the work at the college it has been observed that very little pollen of either the apple or pear is transferred by air currents. The bee is the chief agent in pollination. So great a factor is bright color in attracting bees, that in one case where the petals were removed from fifteen hundred blossoms, only five apples set. Professor Lewis, as a result of several years' study of the self-sterility question affecting apples in the state of Oregon, gives the following list of the self-fertile, partially self-fertile, and sterile varieties in that state:

Self-fertile. Baldwin, Bailey's Sweet, Bethlehemite, Colvert, Fallwine, Grimes' Golden, Keswick Codling, Longfellow, Oldenberg (Dutchess of), Pumpkin Russett, Scott's Winter, Shiwassee, Washington, White Pippin, Yellow Newtown.

Partially self-fertile. Ben Davis, Canada Red, Fall Jenneting, Jewett's Red, Mann, Pryor's Red, Rambo, Stark, Spitzenberg, Wagener, Willow Twig, Whitney's Crab, Yellow Transparent.

Sterile. Autumn Sweet, Arkansas Black, Beitigheimer, Bellflower (yellow), Bottle Greening, Canada Sweet, Canada Reinette, Delawarc, Domine, Dutch Mignonette, Ewalt, Early Strawberry, Fallwater, Grape Bearer, Gravenstein, Golden Sweet, Gano, Green Sweet, Hoover's Red, Haas, Holland Pippin, Holland Beauty, Hydes Keeper, Handwell Souring, Jonathan, King of Tompkins County, Limber Twig, May, Melon Sweet, Munson's Sweet, Maiden's Blush, Montreal Beauty, Missouri Pippin, Ortleigh, Paradise Sweet, Pewaukee, Red Golden Pippin, Red cheeked Pippin (Monmouth Pippin), Romanite, Rome Beauty, Ralls, Rhode Island Greening, Sweet Bough, St. Lawrence, Salome, Summer Queen, Summer Pearmain, Talman Sweet, Steel's Red, Transcendent Crab, Trumbull Sweet, Twenty Ounce, Western Beauty, Wealthy, Winesap and York Imperial.

ENGLISH WALNUTS IN AMERICA

In recent numbers of *The Country Gentleman*, Mr. D. N. Pomeroy of Lockport, New York, gives some interesting statements regarding the English walnut as cultivated in this country. It can be cultivated in the North, he says, wherever the butternut and black walnut grow. He states that while few of these nuts are grown as yet in the East, their quality is better than that of the Pacific Coast product, and they bring higher prices. The special grade quality can be sold at twenty cents a pound wholesale. One man has sold nuts at eighteen cents a pound to the amount of \$360 an acre. Mr. Pomeroy says, "I know of no better business investment in agricultural or horticultural lines, and once established, a well-cared for grove is the best heritage a parent can leave to his family." Can it be, then, that the growing of the English walnut is to be for the North what pecan culture in the South is said to be, the most "promising field in American horticulture . . . for sections that are adapted to this nut?"

MISSOURI FRUIT CROP REPORT

The State Board of Horticulture is in receipt of special reports from practically every county in the state, and from these advices the following summary of conditions regarding the fruit crop up to May 10 is compiled.

APPLES. On the whole, there promises to be a good crop of this fruit throughout the entire state. In the parts of the state where orchards bore heavily last season, there was not a heavy bloom this year. Also, there is universal complaint of a light bloom with the Ben Davis type, and now and then a few other varieties. Jonathan promises especially well almost everywhere. Reports seem to show the best yield in the northeast counties. In the southwest, the crop is well distributed, although not particularly heavy. It is believed there is enough bloom everywhere to insure as much fruit as the trees should be permitted to bear. Prospects now are for the largest crop in years.

PEACHES. The best prospect for Elberta, the leading commercial peach, is in the northeast counties, but there are no large orchards there. This variety was frozen out in the northwest part of the state during the winter. In the eastern counties, peaches will be scarce except a few very hardy varieties which escaped injury in March and May. In the central counties, the peach crop will be irregular. In three of the counties, a fair crop of Elberta is reported, but for the most part the yield will be from seedlings and a few other hardy sorts. In the southwest, but few Elbertas are left. In the south central counties, where the large peach orchards are located, there will be a light crop of Elbertas—probably not more than ten per cent. The damage was done there by the freeze in March.

STRAWBERRIES. From every part of the state the reports say there will be from 75 to 100 per cent of a crop of strawberries. The cold of May 1st nipped some of the earlier sorts, but did not affect the general yield very much, but the season will be a few days later than usual.

CHERRIES promise unusually well all over the state.

PEARS seem to have suffered greatly from the last cold wave as this fruit is reported short from nearly all sections. However, there are many isolated estimates of a 50 per cent crop.

SMALL FRUITS other than strawberries, including blackberries, raspberries, gooseberries, currants and grapes, on the whole promise well. A good many correspondents report a scarcity of raspberries, and there was some little damage done to grapes by the May 1st freeze. On the average, grapes will make one-half of a full crop all over the state.

FERTILIZERS FOR MATURE TREES

C. D. JARVIS, Connecticut

Briefly stated, the manurial recommendations for an apple orchard are dependent upon the age of the trees; the vigor, as indicated by the annual growth; the nature of the varieties; the character of the soil; the previous treatment of the soil; the cultural system employed; the kind of cover crop; the kind of filler used; the nature and amount of other crops grown in the orchard; the availability of fertilizing materials; the severity of pruning; the size of the expected crop; and to some extent, the character of the season. The formula mentioned below should be taken as a suggestion, only, and should be modified to suit special conditions.

For mature apple trees on soil that is apparently in need of a complete fertilizer the following formula is suggested:

Nitrate of soda (15% nitrogen or its equivalent) 200 lbs
 Muriate or sulphate of potash (50% potash or its equivalent) 250 lbs.
 Raw ground-bone (20% phosphoric acid and 3% nitrogen or its equivalent) 400 lbs.

These amounts are intended for the annual treatment of one acre of orchard land. The amounts required for a single tree may be determined by dividing by thirty. This formula may be regarded as a moderate annual application. The amounts may be decreased for moderately small trees and increased for larger ones. When leguminous cover crops are annually grown and turned under and when the trees are making sufficient growth, the amount of nitrate of soda may be greatly reduced or omitted entirely. The same change should be made, also, when trees have been severely pruned, as is usually done in the renovation of neglected orchards. For the immediate benefit of the trees it may be advisable the first year to supplement the above formula with 150 pounds of acid phosphate. This is for the reason that the phosphoric acid in the raw bone is mostly in an insoluble form and the trees would be unable to use much of it until the second season. Once in three or four years it may be advisable to apply, in addition to the above, about one ton of lime to the acre. Good results have followed the use of basic slag in apple orchards, and if five or six hundred pounds of this material is used every second season, in place of the raw ground-bone, the application of lime may be omitted.

In seasons when the trees are bearing a heavy crop of fruit, it may be advisable to supplement the above formula with a light dressing of soluble fertilizer about the latter part of June. This will tend to relieve the strain upon the trees and give them an opportunity to form fruit buds for the following season. About 50 pounds of nitrate of soda and 100 pounds each of muriate of potash and acid phosphate should be the maximum amount to be applied at this time. There is great danger in applying fertilizer at this time, for if there should be a prolonged dry season it would not be dissolved until too late for the present season's crop and would be likely to cause a second growth late in the season. For this reason the summer application should be made just before, or during, a rain.

A knowledge of the functions of the various fertilizers will assist greatly in understanding the needs of the apple

tree. Nitrogen favors the vegetable growth of leaf, wood, and fruit. Phosphoric acid is necessary in the formation of leaf and fruit buds and of seeds. Potash affects the color, quality, and flavor of the fruit and at the same time assists in the vital processes of growth. With these points in mind, the fruit-grower should keep a close watch of his trees with a view of supplying their individual needs.

ARE ORCHARD HEATERS WORTH WHILE?

The editor of *The Fruit Grower*, St. Joseph, Missouri, in the May issue of that paper presents an extremely interesting account of the fight against a 16 degree freeze in the Grand Valley of Colorado early in April. As peaches and apricots were in bloom, the various orchard heating devices were given a test which ought to be sufficient to show the skeptical what orchard heaters can do. Even the most optimistic can hardly expect that the entire crop in any of the orchards could have been saved, especially where a high wind was blowing, since 28 degrees is conceded to be the lowest point at which the trees are safe when in bloom.

Fortunately, nearly all of the growers in this thickly planted valley had equipped themselves with orchard heaters, profiting by the experiences of recent years. When the temperature fell to the freezing point, a preliminary warning was sent out by the United States Weather Bureau, a system of signals having been arranged, so that those growers having no telephone might not be at a disadvantage. After the first alarm, growers kept watch of their thermometers distributed throughout the orchards, and before the temperature reached 28 degrees at least part of the fires were lighted. Nothing less than a small army of people is required to replenish the supply of fuel where coal heaters are used, and to inspect for proper action in the case of the oil heaters; and so great was the interest in the protection of the immense fruit crop that clerks in stores were permitted to leave their work in order to rest during the day and fight the cold at night; automobile owners furnished their machines to assist in carrying reinforcements to camp, and Secretary Mahoney of the Grand Junction Chamber of Commerce was permitted to issue passes to those who would go from Grand Junction by train as volunteers.

The writer states that by midnight on the night of the big freeze about three-quarters of a million heaters were blazing out in the darkness, but even then great damage resulted. What is expected ordinarily when orchard heaters are used is to supply sufficient fuel to keep them going eight or nine hours, as sunrise generally causes an immediate rising of the temperature. But this time it was not so. In the Cross orchard, whose 42 acres were equipped 100 heaters to the acre, the workers were victorious over Jack Frost all night; but when with sun-up there came a drop of eight degrees in half an hour, Mr. Cross was so sure his crop had been completely destroyed that he sold his remaining oil to his neighbors. In other orchards, the men, confident of the beneficial effect of the sun's rays, left their heaters to go to breakfast, only to have their crops practically wiped out before they returned. It was twelve hours from the time the first heaters were lighted until the danger point was passed.

Quiz Column

PROPAGATING WEeping BIRCH, MULBERRY AND CATALPA BUNGEII

Can you give me some information on budding the following stock? What month is the best for the work?

1. Cut-leaved Weeping Birch.
2. Catalpa Bungeii.
3. Teas Weeping Mulberry.

Will be greatly thankful for the information.

WM. MOELLER.

ANSWER

The season of budding either in spring or autumn will naturally vary with the locality, and again within certain limits as affected by seasonal peculiarities. Cut leaved weeping birch throughout the northeast, including New England and New York, may usually be budded during the month of August, but the budding season may be shortened or lengthened by irrigation and tillage, which would tend to continue the growing period.

Catalpa Bungeii and Teas weeping mulberry are, we believe, more generally propagated by top grafting than by budding. The season for inserting the scions would be before growth began in spring, although if absolutely dormant scions were used, the operation could be successfully performed as late as the opening of the leaf. If autumn budding is practiced, the operator must determine as in the case of cut leaved weeping birch, by examination of the stocks from time to time just when the conditions are right. The buds should be inserted when the beginnings of the maturing process are apparent, that is to say, when the bark shows signs of completing the summer's growth by ripening up, and tightening down, in other words, by becoming adherent to the wood. This is the nurseryman's test for the period of budding.

ED.

W. & T. SMITH COMPANY, GENEVA, N. Y.

We believe it is necessary to have actual practice in growing these trees in order to be successful.

Some years we had almost a total loss on budding birch. They require the very best of budders and very careful handling. The cut leaf variety is usually budded on the European White Birch, at the proper time in August. Catalpa Bungei is top grafted during May on the Catalpa speciosa, and the Tea's Weeping Mulberry is top grafted at the same time, on the Russian Mulberry stems.

Our suggestion would be that your correspondent would save money by buying his trees of men who make a specialty of growing them.

ELIZABETH NURSERY CO., ELIZABETH, N. J.

Cut Leaf Weeping Birch is raised mostly by budding in August or September.

Catalpa we bud in the spring as soon as the sap begins to flow. Some people top graft them early in spring. Weeping Mulberry are best raised by top grafting early in spring.

W. F. NILISKY, Supt.

BUSINESS DISCONTINUED

The following nurserymen are reported by the Post office authorities as having discontinued business at the address given in the last Florists' Directory of Nurserymen, Seedsmen, and Florists:

ARKANSAS

E. G. Butler, Paris; J. D. Fisher, Clarksville.

IOWA

Paul Bernard, Clemons; Charles Felkins, Brooklyn; Martin Herman, Mount Ayr; James McSweeney, Carson; Maple Leaf Nursery, New Market; Mt. Vernon Floral & Nursery Co., Mt. Vernon; Jos. A. Paul, Onslow; L. F. Pierce, Mediapolis; Platte Cedar Nursery, Kent; Rakestraw-Pyle Co., Des Moines; Waterloo Nursery Co., Waterloo; J. Wells, Steamboat Rock.

KANSAS

Moses Bradford, Lyndon; J. G. McNeill & Sons, Seranton; James A. Yearout, Lyndon.

MISSOURI

M. S. Good, Hitt; J. H. Moseley Nursery, Campbell; Rosedale Nurseries, Victoria; Spencer Seedless Apple Co., Lee's Summit; T. H. Thorweger, St. Louis.

NEBRASKA

E. R. Gibson, Wayne; Lynch Nursery Co., Lynch; H. Thomas, St. Paul.

The following have retired from business:

ARKANSAS

A. J. Holland, Abbott.

IOWA

A. B. Elliott, Red Oak; E. B. Gay, Griswold; Gurney Seed & Nursery Co., Monticello; Nelson Hansen, Clear Lake; D. A. Hart, Delmar; S. M. Heck, Marengo; I. R. Hoyer, Boone; Geo. R. Lochrie, Lorimor; C. L. Meek, Mt. Vernon; R. E. Overman, Garrison; F. S. Phoenix, Davenport; F. C. Reese, Corning; A. P. Root, Murray; A. G. Samuelson, Lockridge; Sioux City Seed & Nursery Co., Sioux City; Julius Weber, Malcolm; Zimmer & Son, Woodbine.

KANSAS

Wm. Brown, Sharon; Hill Brothers, Emporia; S. H. Mitchell, Longton; B. F. Oxley, Owinter.

MISSOURI

L. Mohler & Bros., Warrensburg; Chas. Purzner, Jefferson City.

NEBRASKA

W. H. Bruning, Cedar Bluffs; W. R. Harris, Teeumseh; O. D. Howe, Table Rock; Joseph Marian, Hastings; G. A. Strand, Minden.

"THE INSPECTION, CERTIFICATION AND TRANSPORTATION OF NURSERY STOCK," Bulletin 20, State of New York Department of Agriculture.

The Department of Agriculture at Albany, New York, has recently issued this bulletin, which covers the laws not only of New York State, but of the other states and Canada. This bulletin can be obtained upon application to the Department of Agriculture, Raymond A. Pearson, Commissioner, Albany, New York.

FRUIT OUTLOOK IN NEBRASKA

Our apricots have set fruit, apparently have suffered no harm. Plum and cherry are in excellent condition. Black raspberries, blackberries, strawberries and grapes are in excellent condition. The apple buds up to this time have suffered no harm. At this moment the indications are very encouraging for a crop of fruit. During our dry springs where the country is dry over a wide area, there seems to be less liability to severely dangerous cold waves.

Crete, Nebr.

E. F. STEPHENS.

Our Book Table

BREEDING PLANTS AND ANIMALS. W. M. Hays, Assistant Secretary of Agriculture. Published by Farm Student's Review, St. Anthony Park, Minn.

This volume is a reprint of a series of papers published by the author in the Breeders' Gazette, during 1902-3-4. The papers are popular discussions of various phases of plant and animal breeding. They refer largely to the experiences of the author in his important wheat breeding experiments in Minnesota and discuss theoretically some phases of animal breeding. The little volume contains a good deal of suggestive material, and although lacking in certain editorial and mechanical respects, will be appreciated by those who are interested in this phase of plant and animal production.

THE BOOK OF THE ROSE, by the Rev. A. Foster-Melliar. 5 x 7 1/2 in. 356 pages. Published by The MacMillan Co., New York. Price \$2.00.

The fourth edition of this excellent volume has just come from the press. It is prefaced by a memoir of the author. The fact that we have so many English authors who are clergymen is a striking commentary on the love of the clergy for outdoor life. This edition of the work has been improved by the introduction of a number of half tone plates illustrating desirable varieties of roses, methods of culture under glass and in the open. "The Book of the Rose" is one which every plant lover will appreciate, because it breathes the spirit of the man who wrote from his heart, and out of the fullness thereof, and transcribes not merely the thought of a book-maker.

THE HOME GARDEN, by Eben E. Rexford. 198 pages. 5 x 8 in. Illustrated. Published by J. B. Lippincott Co., Philadelphia and London. Price \$1.25.

In the foreword of this decidedly useful little volume, Mr. Rexford tells us that the garden which is well cared for will pay better than any other part of the farm. He urges every family which can do so to have a garden for four reasons: first, because a garden properly cared for will furnish at least half the living of an ordinary sized family, made up of persons who are fond of vegetables; second, it will furnish these vegetables fresh; third, it will afford large variety; fourth, it will provide a healthier diet than one composed largely of meats and other heavy foods. Further, he recommends garden work as a change for the man whose occupation keeps him indoors, and as a tonic for the woman who is inclined to make drudgery of her housework.

The book is written so simply and interestingly that it makes gardening seem to the amateur almost like play,—yet it urges thoroughness in every detail. The gardener is warned to have his garden site well drained,—artificially if not naturally—to prepare the ground carefully by plowing and harrowing, to plant vegetables in long rows, and to simplify the work as much as possible by the use of garden implements, which are so varied and inexpensive. Several chapters are devoted to remarks on desirable vegetables and small fruits. The gardener's calendar at the end of the book is a handy reminder. The volume deserves high recommendation as a handbook of concise and valuable information for the amateur.

REPORT OF THE COMMISSION ON COUNTRY LIFE, published by Sturgis & Walton Company, New York. 5 x 7 1/2 inches. 150 pages. Price, 75 cents net.

This book will receive a hearty welcome; for the work of the commission appointed by Mr. Roosevelt during his term of office as President to investigate conditions of country life, with a view of making suggestions which would lead to the development of a better rural civilization, cannot fail to have excited the interest of many people throughout the country, and a report of the commission has not heretofore been available to the public. The volume contains an introduction by Mr. Roosevelt which reminds

us that the welfare of the whole nation is very intimately connected with conditions on the farm. The commission, whose chairman is Professor L. H. Bailey, presents remarks on such questions as disregard of the inherent rights of land workers; highways; soil depletion; and agricultural labor; and suggests as corrective forces the making of agricultural surveys, which would indicate the possibilities of given regions; the redirecting of rural schools so as to make the education given therein relate to the daily life of the country community; and the desirability of rural citizens working together.

REPORT OF FLORIDA MEETING OF THE AMERICAN POMOLOGICAL SOCIETY

Fruitgrowers throughout the country, but more especially the citrus growers and the producers of subtropical fruits, will be interested in knowing that the volume containing the proceedings of the American Pomological Society meeting held at Tampa, Florida, last February has just come from the press. Secretary John Craig of Ithaca, New York, writes that it forms an indexed book of over 300 pages. He further states that the information contained within its covers is contributed by experts and specialists in their particular fields.

This volume is valuable on a three-fold account. It contains the fullest presentation of methods of handling, transporting, and marketing citrus fruits to be found anywhere; it contains an important symposium on the status of pecan culture in the Gulf region; orchard heating is one of the topics which is a live issue today, and this is discussed in the light of the most recent advances. In addition to these subjects, orchard management forms another important chapter. The history, classification, and propagation of the mango by Professor Rolfs of the Florida Experiment Station is the most important contribution on mango culture thus far published. The Japanese persimmon, its propagation, culture, and a method of processing the fruit so that the astringency is removed, forms an interesting chapter by Prof. H. Harold Hume of Glen Saint Mary, Florida. Persons interested in these topics and desiring the publication should write to the Secretary of this national society.

Obituary

AGED NURSERYMAN MEETS DEATH ON RAILROAD TRACK

While attempting to cross the New York Central tracks which divide his property at Winton Road, Thomas C. Wilson, of Brighton, failed to see a passenger train but a short distance off, and met instant death when struck by the engine. Mr. Wilson, by birth a Scotchman, was one of the first men to engage in the nursery business in that section, having settled in Brighton with his parents seventy-eight years ago, when he was but five years old. He remained in that business until the time of his death.

Messrs. de Graaff Brothers Ltd., deeply regret to inform you of the death of their senior partner Herr L. de Graaff, which occurred at Leiden April 25th at the age of 71.

JAN DE GRAAFF,
W. H. DE GRAAFF.

Leiden, 25th April 1911.

"We have had the biggest Box Strap trade this spring we ever had. We are now engaged in the manufacture of car seals also."—Ward-Dickey.

Judge the Nurserymen are doing good business."

H. G. Benekhuysin, representing H. den Ouden & Son, The Old Farm Nurseries, Boskoop.

ADVICE ON PURCHASING NURSERY STOCK

J. G. MOORE, Wisconsin

Be Willing to Pay a Good Price. It is a very serious mistake to try to cut the cost of the trees too much. Cheap trees are usually poor trees. It is not necessary to pay exorbitant prices in order to get good trees, but it is better to pay exorbitant prices and get good trees than to buy poor trees at cut rates. The original cost of the tree is of minor importance to its ultimate value. Ten or even 25 cents saved at the start by buying an inferior tree is usually expended several times later on in trying to make a good tree out of a cull, and usually with very little success. Ten cents per tree increase in cost is only about \$7.00 an acre, and very often means the difference between success and failure. Paying a high price for a tree does not necessarily mean that it will be a good one. Pay enough to get the best and then refuse any which do not come up to the standard.

Another item which increases the cost is replacing stock. The general practice of Wisconsin nurserymen is to replace stock which dies the first season. In order to do this they add considerable to the real price of the tree in order that nothing will be lost by replacing. Such a practice invites carelessness in handling and setting the trees. In addition, it works a hardship on the careful man because he is compelled to help pay the cost of his neighbor's carelessness. Almost always the grower will find it worth while to carry his own risks if he orders good trees and is careful in planting them. In writing for quotations on trees he should state that he does not want his trees "guaranteed," and the nurseryman will make a considerable reduction from his regular price. Many nurseries outside of the state do not "replace" stock which dies the first year, and in comparing prices with those quoted in the catalogues of our home nurseries this should be taken into consideration.

LIME SHOULD NOT BE ADDED IN SPRAYING

In using the concentrated sulphur washes from which the sediment has been removed by settling or filtering it is common to add some lime to the diluted solution to give body and make the mixture visible on the trees. Is this a good practice? Chemical analyses say not; for when 10 pounds of lime for 50 gallons was added to each of four solutions of different strength, all within the range of common spraying practice, the soluble sulphides were diminished and both the sulphate and free sulphur increased. In one case the percentage of sulphur in sulphide form dropped from 95 to 59 per ct. and where the decrease was smallest the change was from 96 to 84, a loss of one-eighth in sulphides.

COMMERCIAL MIXTURES EXAMINED

In all, five brands of commercial lime-sulphur mixtures were studied, four in liquid form and one a fine powder. Of the liquid preparations, three brands,—Grasselli, Rex and Thomsen, contained little or no sediment and were all similar in appearance to the liquid portion of laboratory-made samples; while on the other brand,—Niagara—contained widely varying amounts of sediment in the four samples, in liquid similar to the others."—Expt. Sta. Bull.

ORCHARD ENEMIES

(Continued from page 217)

"Leave the base of the trees exposed for a few days now, to toughen the outer bark and then, before again drawing up the soil, spray very thoroughly with a lime-sulphur, arsenate of lead mixture, to which an excess of lime has been added. Use one pound paste arsenate of lead to every five gallons of lime-sulphur, or one pound of dry arsenate to every ten gallons of lime-sulphur and apply with all the force possible to the exposed crown and for a distance of eighteen to twenty-four inches above the surface. Then cover and hill up at least six inches around the trunk after the application is thoroughly dry. The strength of the lime-sulphur wash may be that of the ordinary winter spray with double the required amount of lime."

SAN JOSE SCALE

This scale is nearly circular in outline and about the size of a pin head. When abundant it forms a crust on the branches and causes small red spots on the fruit. It multiplies with marvelous rapidity, there being three or four broods annually and each mother scale may give birth to several hundred young. The young are born alive and breeding continues until late autumn, when all stages are killed by the cold weather except the tiny, half-grown black scales, many of which hibernate safely.

Spray thoroughly in the fall after the leaves drop, or early in the spring before growth begins, with lime-sulfur wash. When badly infested, make two applications, one in the fall and another in the spring. In case of large old trees, 25% crude oil emulsion should be applied just as the buds are swelling. Geneva, N.Y., Bulletins 262, 296 and 320.

LEAF BLISTER-MITE

The presence of this minute mite is indicated by small irregular brownish blisters on the leaves. Spray in late fall or early spring with the home-made lime-sulfur solutions, 1 gal. in 10 gals. of water. Geneva, N.Y., Bulletin 306.

SCAB

Commonly known among growers as the "fungus." Attacks both leaf and fruit, usually most evident on the fruit. Spray with lime-sulfur, 1-40, or with Bordeaux 3-3-50: first, just before the blossoms open; second, just as the blossoms fall; third, 10 to 14 days after the blossoms fall. In most seasons the second spraying seems to be the most important. Spray thoroughly. Whether a third application is necessary is determined by the season.

FOR SALE--NURSERY

Located 1-2 mile from car line, near large western city where there is a good opening for nursery business. Grounds comprise 19 acres—15 acres in young shade and small fruit. Seven room house—good barn. Snap for right party.

Address, W, care of National Nurseryman.

AGRICULTURAL COLLEGE GRADUATE (age 44) who has specialized in Landscape Gardening, Horticulture and Plant Physiology, and has much special knowledge of outdoor art, and traveled much, wishes position with municipality or ornamental nursery firm. C. GRANDPIERRE, 473 W. 21st, New York.

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is the name of the men who grow the finest

CHERRY

that can be produced by suitable soil, climate and expert knowledge.

Take a look at the stock or ask for a sample and be convinced of the extra quality of their

TREES

CHERRY—3-yr., 2 inch up, 7 to 9 feet, for high-class retail trade

APPLE—1 year and 2 year.

H. M. Simpson & Sons

VINCENNES, INDIANA

Seedling and Transplanted Evergreens by the million

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Concolor

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Pinus Ponderosa

Scotch Pine

White Pine

White Spruce

We have these in all sizes and ages. Also a general line of nursery stock.

Evergreen price list now ready.

SHERMAN NURSERY COMPANY

CHARLES CITY, IOWA

ENGLISH NURSERY STOCK

EXTENSIVE STOCK OF CONIFERS, including a quantity of well-shaped specimens for decorative purposes. Low prices can be quoted on all Conifers. **HARDY ORNAMENTAL EVERGREEN AND DECIDUOUS TREES.** ROSES, Standards, Dwarfs and others. **MANETTI** and other **ROSE STOCKS.** **FRUIT TREES** in large quantities. Transplanted **FRUIT TREE STOCKS.** **RHODODENDRONS** and other **AMERICAN PLANTS.** (A good stock of all hardy varieties of Rhododendrons). **CLEMATIS** and other **HARDY CLIMBING PLANTS.** Transplanted **FOREST TREES.** The stock is in excellent condition this season. **FIRST GRADE STOCK ONLY SUPPLIED.** 30 years' successful trading in the States. No Agents. Write direct for wholesale catalogue.

Walter Charles Sloccock,

Half-hour's rail from London by L. & S. W. Ry.
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Dept. 3, Glen Saint Mary, Florida

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True to Name

Your trade will be quick to see the value of Glen Saint Mary stock—our methods of propagating assure quality and satisfactory results, and much of our product will succeed practically all over the North. Let us know your wants—we'll gladly supply prices and particulars on request.

HAVE YOUR CUSTOMERS kept their promise to pay their bills at Easter? If not, do not wait; but send the claims to us, When we remind them they will probably pay.

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Large stock of Polyantha (Baby) Roses and Climbing Roses, either on own roots or grafted on Canina.

A FULL LINE OF HARDY NURSERY STOCK

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==FOR JUNE BUDDING==

**TWENTY-FIVE
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Apple	Poplar Carolina	Ampelopsis
Pear	Poplar Volga	Roses
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Cherry	Sycamores	California Privet
Peach	Mountain Ash	Buxus
Grape	Althea	Weeping Trees
Currant	Hydrangea	Catalpa Seedlings
Gooseberry	Barberries	Black Locust "
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PEACH—General assortment.

CHERRY—1, 2 and 3 year; some heavy trees.

PEAR—STANDARD, Kieffer, 1 year.

ASPARAGUS—1 and 2 year.

CALIFORNIA PRIVET—1, 2 and 3 year, in carload lots—fine.

ORIENTAL PLANES.

CAROLINA POPLARS.

NORWAY and SILVER MAPLES.

RHUBARB—1 and 2 year.

We also have a general line of other stock. Send us your WANT LIST. We need your orders.

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ORNAMENTAL STOCKS

NURSERIES
420 ACRES

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FRUIT TREE STOCKS—All Sizes.
300 varieties of Conifers, 1 to 4 years old.
1200 varieties of Ornamental Trees and Shrubs, 1 to 3 years old.
1600 varieties of New and Old Ornamental Trees & Shrubs in all Sizes.
250 varieties of Climbing Plants.
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Samples and prices are at the command of a communication from you.

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South Canal St., Dayton, Ohio

F. J. GROOTENDORST & SONS,
BOSKOOP HOLLAND

Complete line of high-grade Ornamental Trees, Shrubs, Evergreens and Bulbs. SPECIALTIES: Acer, Aesculus, Ampelopsis, Aristolochia, Azalea, Buxus, Clematis, Dielytra, Funkia, Hydrangea, Kalmia, Magnolia, Paeonia, Phlox, Rhododendron, Roses, Standard Roses, Conifers, Tulips, Hyacinths, Narcissus, Crocus, Palms, Bay Trees.

Catalogue on application to our Mr. C. Grootendorst, care of Messrs. P. C. Knyper & Co., 10-12 Broadway, New York.

VAN DER WILLIK & CO.

ROSE GROWERS
BOSKOOP, HOLLAND

Offer strong ROSES, mostly grown on Rogosa. Hybrid Perpetual Roses such as Mrs. St. John Laing, Paul Neyron, Magna Charta, Gabriel Lambert, Hybrid Tea N. A. Victoria, General M. Arthur. Also many other varieties:

Farben Nonigin, Grace Darling, Gruss an Teplitz, Killarney Mad. Abel, Chatenay, Prince de Bulgarie, and Richmond.

Please ask for our price list of Roses and Novelties. Cash with order or reference. Order soon to be sure to get the plants you want.

Ask also for list of all nursery stock.



Small Fruit Plants for the Nursery Trade, Spring 1911

Black and Purple Raspberry Tips, Red Raspberry, Blackberry, Dewberry, Strawberry, Gooseberry Layer Plants, 1 and 2 years Layered, Orange Quince, Gooseberry and Currant Cuttings, Asparagus, 1 and 2 year old, Horseradish, Rhubarb 1 and 2 year old Roots, also divided Roots. Write for prices.

P. D. BERRY, Dayton, Ohio

LABELS for NURSERYMEN

Plain or
Printed

The Benjamin Chase Co. Derry Village, N.H.

Ben Davis

ALL "AMERICAN NURSERYMEN"

Wishing to do business with Europe
should send for the

"Horticultural Advertiser"

This is **The British Trade Paper** being read weekly by all Horticultural traders. It is also taken by over 1000 of the best Continental houses. Annual subscriptions to cover cost of postage, 75 cents. Money orders payable at Lowdham, Notts. As the H. A. is a purely trade medium applicants should, with the subscription, send a copy of their catalogue or other evidence that they belong to the nursery or seed trades. Address

Editors of the "H. A." LOWDHAM, NOTTS,
ENGLAND.

Charles Detriche, Senior

ANGERS, FRANCE

Grower and Exporter of Fruit-Tree Stocks,
Forest Tree Seedlings, Rose Stocks, Shrubs,
Vines, and Conifers for Nursery Planting.

For all information as to Stocks, prices, terms, etc., address

JACKSON & PERKINS CO.

(SOLE AGENTS)

NEWARK, N. Y.

Northern Grown Nursery Stock

We Grow a General Assortment of Trees, Shrubs, Vines, Roses and Herbaceous Perennials, Etc.

Prices Reasonable. Wholesale Trade List for the Asking.

The Bay State Nurseries, North Abington, Mass.

HEADQUARTERS

FOR

FOREST TREE SEEDLINGS AND CUTTINGS

ASH, COTTONWOOD, WILLOW and others

Ready to deliver.

Write us for prices.

Will contract to grow.

THE WHITING NURSERY CO.

YANKTON, S. DAK.

Rhododendrons, Hardy Hybrids, named in the best modern American varieties, *Andromeda florabunda*, *Ericas*, *Azaleas*, *Kalmia latifolia*, and other American plants.

Pinus Cembra, *Retinosporas* in variety, Box in variety, Golden Privet, Copper Beach, and other ornamental Trees and Shrubs.

Manetti Stocks for delivery Autumn 1911.

W. FROMOW & SONS

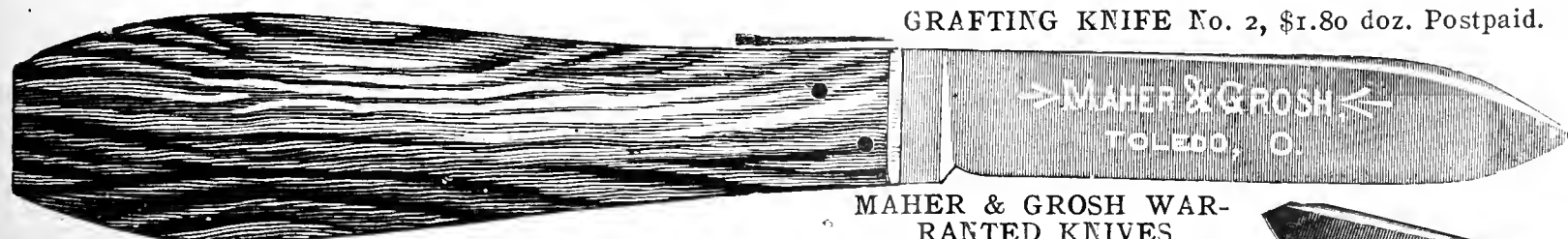
WINDLESHAM NURSERIES, SURREY, ENGLAND

Messrs. A. RÖLKER & SONS, 31 Barclay St., New York,
P. O. Box 752, Sole Agents for America.

LEVAVASSEUR & SONS, Nurseries at Ussy and Orleans FRANCE

Wholesale Growers of Fruit Tree Stocks, Ornamentals, Evergreen Seedlings, etc. Best Grading Quality, and Packing. Largest shippers to this country. All leading nurserymen are our regular customers. Orders booked now for delivery for season of 1911. Compare prices quoted in last Trade list. For catalogues and price list address us or our

American Agents, AUGUST RÖLKER & SONS, New York, 31 Barclay Street or P. O. Box 752.



GRAFTING KNIFE No. 2, \$1.80 doz. Postpaid.

MAHER & GROSH WAR-
RANTED KNIVES

Pocket Grafting Knives, 30, 40 and 50c. each. Nursery Pruner, 50c. postpaid. Nursery Budder, 25c. postpaid. Pocket Budder, 35c. postpaid.

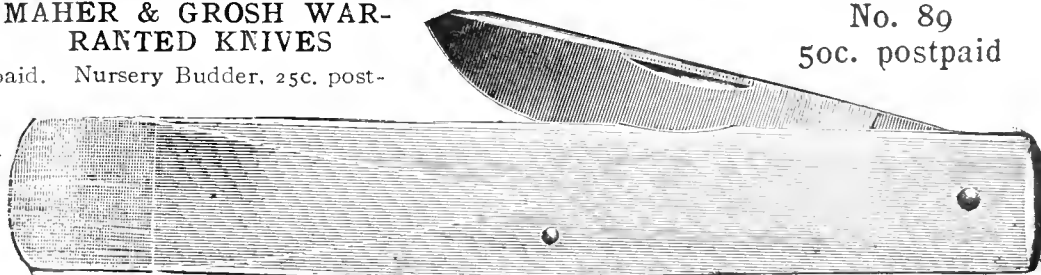
The FLORIST KNIFE—No. 89, as shown, 50c.; 6 for \$2.50. No. 89 1/2 has grafting point blade, same price. These blades are equal to any razor in fineness.

Send for 12 page Nursery Tool Catalogue.

MAHER & GROSH CO., 90 A St., TOLEDO, OHIO

FLORISTS' KNIFE
White Handle

No. 89
50c. postpaid



FOR SPRING

We have the largest and most complete assortment of Ornamental Trees, Shrubs and Herbaceous Plants we have ever grown. Also Tree Seedlings in large variety.

We have genuine Catalpa Speciosa and Black Locust in large quantities. You cannot afford to buy before getting our quotation, it will pay you.

Are now ready to quote you.

The Willadean Nurseries
SPARTA, KENTUCKY.



THE UNITED STATES NURSERY COMPANY,
ROSEACRES, Coahoma Co., MISSISSIPPI.

We have a splendid stock of

Grape Vines

and other small fruit plants for the Nursery trade, graded up to the highest standard and sure to please you.

Give us a trial order, send in your list now for quotations

WILLETT & WHELOCK

North Collins, N. Y.

J. H. SKINNER & CO.

Station "A," Topeka, Kansas.

**Fruit, Shade and
Ornamental Trees**

∴ FLOWERING SHRUBS ∴
APPLE AND PEAR SEEDLING
∴ FOREST TREE SEEDLING ∴

The Greatest Apple Nursery in the West

We offer the trade a fine assortment of our famous Yakima Valley grown yearling grafts in apple and pear for delivery, season 1911-12. See Mr. F. A. Wiggins, our vice-president at the St. Louis convention, Badge number 255.

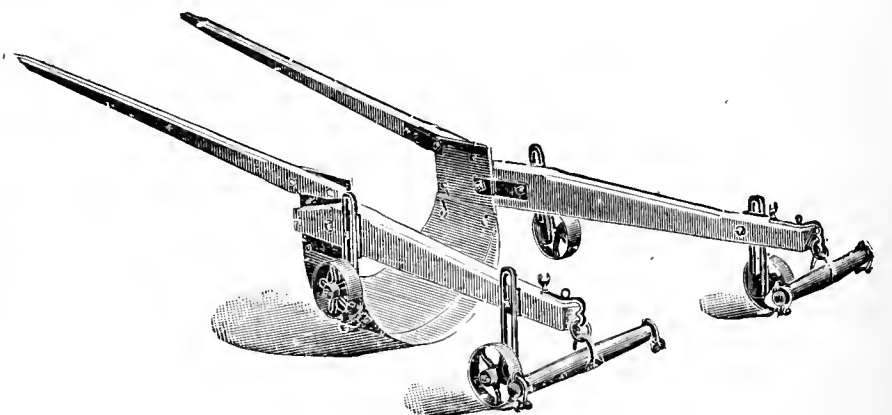
**Washington
Nursery Co.**

TOPPENISH, WASH.

1857-1911

BRAGG'S COMMON SENSE TREE DIGGER

REPAIRS ALWAYS ON HAND SEND FOR CATALOG



Digger gets all the roots at the rate of 20 to 40 thousand trees per day, and only needs same power as plow.

L. G. BRAGG & CO.

KALAMAZOO, MICH.

Fumigation with Hydrocyanic Acid Gas Generated From Cyanide $\frac{98}{99}\%$

Is the only positive eradicator of San Jose Scale and other Insect Pests. Endorsed by all agricultural experiment stations.

Manufactured by
The Roessler & Hasslacher Chemical Co.
100 WILLIAM ST., NEW YORK

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FRUIT AND SEED FARMS

OFFER for Spring 1911

GRAPE VINES—One and two years old. Varieties largely Moore's Early, Concord and Niagara.

Also Scarlet or Crimson Clover Seed and Cow Peas. Free from weed seeds, all recleaned and guaranteed first class.

Correspondence solicited. Price list upon request.

CHAS. M. PETERS

P. O. Address, Salisbury, Wicomico County, Md., R. F. C. 3
Long Distance Phone and Telegraph, Salisbury, Md.

We offer a NICE ASSORTMENT OF PEACHES

in 1 year and June Buds

**Japan Plum Carolina Poplar
and California Privet**

Let us price your wants on the above stock.

The Greenbrier Nursery Co., Inc.
GREENBRIER, TENNESSEE

MENERAY-CRESCENT QUALITY STOCK

We grow a general line of both fruit and ornamental stock. Everything of the very best, at the right price.

GET IN TOUCH WITH US FOR YOUR
NEXT SEASON'S SUPPLY

F. W. MENERAY CRESCENT NURSERY CO.
COUNCIL BLUFFS, IOWA

WE OFFER

For FALL 1910 and SPRING 1911
Grape Vines, Currants and Gooseberries
in all varieties and Grades

—also—

Grape and Currant Cuttings and Light
Grade of Vines for Lining Out
in Nursery Rows

WRITE FOR PRICES

F. E. SCHIFFERLI, Fredonia, N. Y.

Vincennes Nurseries,

W. C. REED, Prop.

VINCENNES, IND.

Leading Specialties for Fall 1910, and Spring 1911.

Cherry—Two Years, $\frac{3}{4}$ to 1 in., and 1 inch up. Best block we have ever grown.

Cherry—One Year. All Leading Varieties. Strong on Sweets, such as Bing, Lambert, Luelling, and other Western Sorts.

Standard and Dwarf Pear—One and Two Year.

150000 Apple—One Year. Strong on leading commercial varieties.

10000 Quince—One and Two Year.

30000 Plum—One and Two Year, on Peach and Plum roots.

150000 Peach—One Year. All leading varieties.

5000 Norway Spruce, 2 to 3 feet, and 3 to 4 feet.

Also general line of other stock. *Personal inspection invited.*

Our Blocks of Cherry are among the largest in the country. None better.

E. T. DICKINSON,

CHATENAY SEINE, FRANCE.

Grower and Exporter of

French Nursery Stocks, Dutch Bulbs, Gladioli, Etc. Fruit
Tree Stocks. All grown for the American trade.

PEAR AND CRAB APPLE SEED,

The most complete assortment of Ornamental Stocks,
Trees and Shrubs.

Geo. E. Dickinson, 1 Broadway, N. Y.

BOX STRAPS

AND CAR SEALS

WARD-DICKEY STEEL COMPANY

Manufacturers of Planished Sheet Steel
INDIAN HARBOR, IND.

OUR NEW SCION LIST JUST OUT.

APPLE SCIONS OUR SPECIALTY

We have our usual supply of Nursery Stock. Apples, Cherry
and Peach in good supply. Write us.

JOHN A. CANNEDY NURSERY AND ORCHARD CO.
CARROLLTON, ILL.

Surplus Stock Peach Seed

Removal Sale of Surplus Stock of some 2000 Bushels Virginia Natural Peach Seed that we offer at 50% Reduction. Special Inducements On Car Lots.

W. W. WITTMAN & CO. - Baltimore, Md.

Phone 4382 St. Paul

OLYMPIC NATURE NURSERY

The Forest Conservatory

WILD FRUITS, FLOWERS AND EVERGREENS

Oregon Grape, Huckleberry, Salmonberry, Blackberry, Rhododendrons, Flowering Currants, Ferns, Madronas, Firs and other natives of the Pacific Northwest Coast.

JOEL SHOMAKER, Nellita, Washington

EASTERLY NURSERY CO.

CLEVELAND, TENN.

OFFER FOR FALL 1911

One and two year Apple; One year and June Bud Peach; California Privet, in car-load lots. Also Magnolia, Grandiflora, Arbor-Vitea, Norway Spruce, Md. Plantier, and Baltimore Bell Roses. Ask for prices.

Capacity 200,000 Per Day.

Prompt Deliveries Our Specialty

WOOD TREE AND POT LABELS

Iron or copper wired, printed, painted and plain. Everything made of wood for nurserymen or florists. No order too large or too small for prompt execution.

Write for samples and prices

ALLEN-BAILEY COMPANY
DANSVILLE - - N. Y.

80,000 PEACH TREES For Fall Delivery

Also full line of nursery stock, including Red Oak, Berberis, Thunbergi, White, Austrian and Scotch Pine, Norway Spruce, Grapes, Currants, etc.

M. T. TWOMEY, - Franklin, Mass.

Nurserymen !!!

When in NEW YORK Stop at the

NAVARRE

SEVENTH AVE. & 38TH STREET

Business Men Families
Tourists

Accessible Quiet
Elegant

Within Five Minutes' Walk of Theatres, Shops and Clubs. 300 Feet of Broadway.

Dutch Grill and Summer Rose Garden.

Electric Cars Pass Hotel to all Railroads.

EUROPEAN PLAN

\$1.50 Per Day Without Bath

\$2.00 Per Day With Ba

Suites \$3.50 upwards

Send for colored map of New York

EDGAR T. SMITH, Managing Director



P. OUWERKERK,

No. 216 Jane St., Weehawken Heights, Hoboken, N. J.

Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our HOLLAND NURSERY. Some of the goods on hand here during the packing season.

Peach Trees and Strawberry Plants

all leading market sorts for Fall 1910 and Spring 1911

MYERS & SON, Bridgeville, Del.

Doornbosch & Son - Veendam, Holland

They are up, and we will again have 4,500,000 APPLE SEEDLINGS this year. Also Pear-, Plum-, Cherry-Stocks and ROSA CANINA. Our stocks are growing on new land and are exceptionally free from all diseases.

For all information as to stocks, prices, terms, etc. address:

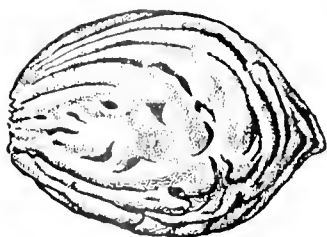
THE HORTICULTURAL CO., WORCESTER, MASS.

SOLE AGENTS FOR UNITED STATES AND CANADA

1910

CROP

**NURSEYMEN
BUY NOW !**



**We Are the Largest
Shippers of Peach Seed
in the South.**

The indications are that there will be little if any PEACH SEED this year, therefore, it will pay you to get your orders in early.

We have a limited quantity of PEACH SEED, and all orders are taken subject to having the stock on hand.

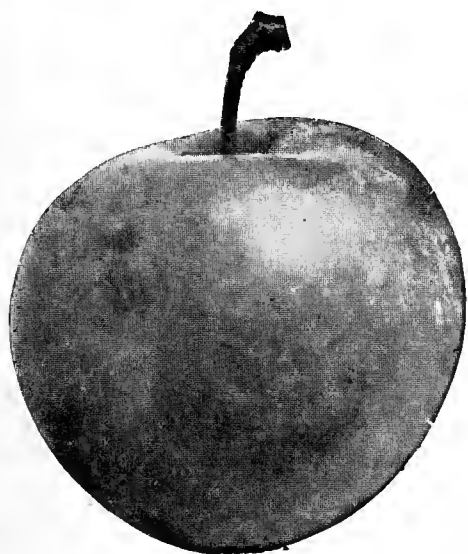
Send in your orders today. We ship in heavy bags, holding 2 1-2 bushels each. Write now for prices.

MORRISON PRODUCE & PROVISION CO.
STATESVILLE, N. C.

Established 1865

150 Acres

Incorporated 1911



ABUNDANCE PLUM.

**MALONEY BROS.
and WELLS CO.**

DANSVILLE, N. Y.

Offer strictly hardy up-land grown trees guaranteed true to name and free from scale, a good assortment of the following:

2 yr. European Plum	2 yr. Dwarf Pear
2 " Japan Plum	3 " Std. Apple Grafts
2 " Sour Cherry	1 " Quince
2 " Sweet Cherry	1 " Japan Plum
2 " Standard Pear	2 " Carolina Poplars

Carefully selected buds for budding furnished at a reasonable price.

Personal attention given to each and every order.

Let us price your list of wants. We will save you money.

Secure your trees and buds from a section where San Jose Scale has never been found.

L. R. TAYLOR & SONS

TOPEKA, KANSAS

We Grow

**APPLE SEEDLINGS
of Quality**

The HARD, BRITTLE, SNAPPY SORT, only produced by Strong New Land

STOP USING SOFT, SPONGY SEEDLINGS
GROWN ON OLD WORN OUT SOILS

A fine lot of

**JAPAN PEAR SEEDLINGS
APPLE CHERRY PEACH
and PEAR TREES**

See you at Convention, Badge 224

Your Opportunity

To Buy Harrison's "Quality Stock"

APRIL, 24, 1911

Following is a list of surplus trees, plants and shrubs, unsold on the above date. This is all first-class stock of real "Harrison Quality"—clean and healthy, with good roots.

We have first-class shipping facilities and can forward orders promptly. We have a private siding running into our sheds on which we can load several cars at once. All roots are carefully "puddled;" we pack in moss and straw, burlapping evergreens, crating strawberry and other small plants, and bundling or boxing trees. Carload orders are heavily packed and the doors sealed.

Give us a trial. This stock will please your trade and bring you more business. Usual terms: June 1, 1911.

STRAWBERRY

We Have Over Ten Million Plants

120,000	Aroma
30,000	Auto
52,000	Bederwood
10,000	Bismarck
52,000	Brandywine
834,000	Bubach
27,000	Chipman
310,000	Crescent
440,000	Duncan
138,000	Early Hathaway
54,000	Ekey
68,000	Excelsior
45,000	Fairdale Giant
200,000	Fendall
2,456,000	Gandy
188,000	Genl Mary
400,000	Haverland
30,000	Johnson's Early
2,280,000	Klondike
120,000	Lady Thompson
23,000	Mark Hanna
120,000	Mascot
125,000	Millionaire
186,000	Michel's Early
42,000	New York
54,000	New Horne
79,000	Nick Ohmer
30,000	Norwood
72,000	Oak's Early
88,000	Oswego
5,000,000	Parson's Beauty
220,000	Sample
118,000	Senator Dunlap
240,000	Sharpless
120,000	Star
20,000	Stephens' Late Champion
75,000	Superior
248,000	Tennessee
330,000	Warfield

APPLE—two year

	6-7 ft 1 in.	5-6 ft $\frac{1}{8}$ -1 in.	4-5 ft $\frac{5}{16}$ - $\frac{1}{2}$ in.	3-4 ft. $\frac{3}{8}$ - $\frac{1}{2}$ in.
Ben Davis.....	1000	1000	1000	1000
Cooper's E. Market.....		150	150	100
Dominie.....		400	100	
Early Harvest.....		1000	1400	1200
Gano.....	500	2000	2000	2000
Golden Beauty.....	1000			
Lawver.....	50	100	50	
M. B. Twig.....	1000			
Missouri Pippin.....		200	400	100
Myrick.....		200		
Payne's L. Keeper.....		100	100	
Porter.....		100	200	50
Roman Stem.....	50	500	200	100
Red Astrachan.....			1000	1000
Salome.....			200	200
Stark.....	1130	1100	1000	170
Winesap.....	1000	5000	5000	5000
Yel. Transparent.....	500	1000	1000	4000

APPLE—one-year—budded

	5-6 ft. $\frac{5}{8}$ -in.	4-5 ft. $\frac{1}{2}$ -in.	3-4 ft. $\frac{3}{8}$ -in.
Cofelt.....	250	250	
Cooper's Early Market.....	400	400	
Carthouse.....	300	300	
Duchess.....			3000
Dominie.....	200	200	200
Early Harvest.....	3000	3000	3000
Early Strawberry.....	200	200	200
Early Colton.....	200	200	100
Fourth of July.....	300	300	300
Fannie.....	200	200	200
Fallowater.....	100	100	100
Fall Pippin.....	300	200	200
Golden Beauty.....	300	300	100
Golden Sweet.....	300	300	300
Gano.....	2000	2000	1000
Hyslop.....	700	700	300
Ingram.....	250	250	
Jefferies.....	400	400	
Kennard's.....	250	250	
Late Raspberry.....	200	200	
Longfield.....	200	200	
Lawver.....	200	200	
Limbertwig.....	300	300	
Lankford Seedling.....	700	100	100
Missouri Pippin.....	500	500	
Mann.....	250	250	
McIntosh.....	2000	3000	2000
Myrick.....	200	200	200
Northern Spy.....	1000		
P. W. Sweet.....	300	300	
Payne's Late Keeper.....	250	250	
Porter.....	200	200	
Pewaukee.....	250	250	
Romanite.....	200	200	
Rolfe.....	500	100	100
Red Astrachan.....	3000	3000	3000
Red June.....	500	500	200
Rambo.....	400	400	200
Rawles' Janet.....	300	300	100
Smith Cider.....	200	400	
Springdale.....	250	250	
Transcendent.....	300	300	300
Salome.....	200	200	200
Stark.....	1000	1000	1000
Tallman's Sweet.....	150	150	
Wolf River.....		1000	1000
Walbridge.....	200	200	
Winesap.....	1000	1000	1000
Yellow Transparent.....	5000	5000	700

APPLE GRAFTS—one-year

	3-4 ft.	2-3 ft
Ben Davis.....	1000	1000
Baldwin.....	50000	50000
Ensee.....	500	500
Gano.....	500	500
N. W. Greening.....	5000	5000
R. I. Greening.....	2000	2000
Red Astrachan.....	1000	1000
Rome Beauty.....	4000	7000
Stark.....	1000	1000
Transcendent.....	4000	1000
Winesap.....	15000	5000
York Imperial.....		10000
Yellow Transparent.....	2000	2000

APPLE, one-year—budded

	5-6 ft. $\frac{5}{8}$ in.	4-5 ft. $\frac{1}{2}$ in.	3-4 ft. $\frac{3}{8}$ in.
A. G. Russett.....	100	100	200
Arkansas Black.....	100	100	
Belleflower.....	500	500	
Ben Davis.....	8000	8000	8000
Baldwin.....	4000	4000	4000
Chenango Strawberry.....	300	300	300

SURPLUS LIST OF PEACH

	6-8 ft. 1-in.	6-7 ft. $\frac{3}{4}$ -1 in.	5-6 ft. $\frac{5}{16}$ - $\frac{3}{4}$ in.	4-5 ft. $\frac{1}{2}$ - $\frac{5}{8}$ in.	3-4 ft. $\frac{3}{8}$ in.	2-3 ft.	1-2 ft
Alexander.....		140	130	30	20		
Amsden June.....	200	290	200	200	200		
Atlanta.....	200	200	200	200			
Belle of Georgia.....	1000	1000	1000	1000	1000	1000	500
Bilyleu's.....	100	100					
Burke's Cling.....		100	220	130	160	120	110
Cornelia.....		210	210	110	180	70	60
Champion.....	1000	2000					
Chinese Cling.....	150	150	150	150	150	150	150
Connett's.....	500	1000	1000	1000	1000	1000	500
Easton Cling.....		100	220	160	130	90	30
Early Michigan.....	100	200	150	100	100		
Elberta.....	9000	9000	14000	10000	10000	10000	5000
Eureka.....	200	300	500	400	100		
Levy's Late.....	500	500	500	500	500		
Linden Cling.....		150	190	90	90	70	30
Lodge.....	250	250	250				
Moore's Favorite.....	1000	1000	1000	1000	1000	1000	
Mt. Rose.....	500	500					
Newington Cling.....	200	200	50	50	50	50	50
Nina.....		100	210	110	120	70	40
O. M. Free.....	2000						
O. M. Cling.....		310	350	280	260	230	10
Preston Cling.....		180	210	80	60	40	20
Ray.....	1000	1000	1000	1000	1000	1000	1000
Stonewall Jackson.....		150	150	120	80	50	30
Sneed.....	400	400	300				
Stinson.....		160	190	110	100	40	
Stump.....	1000						
Sunrise Cling.....	300	300	300	200	100	100	100
Triumph.....	100						
W. H. Cling.....	300	300	300	300	300	300	300
Wilkin's Cling.....	200	200	200	200	200	200	200

ASPARAGUS—two-year

Tied 25 in a bunch

50,000	Palmetto,	50,000	Donald's Elmira
50,000	Barr's,	50,000	Giant Argenteuil
50,000	Conover's,		

PEAR—standard

	6-7 ft. $\frac{3}{4}$ -1 in.	5-6 ft. $\frac{5}{8}$ - $\frac{3}{4}$ in.	4-5 ft. $\frac{1}{2}$ - $\frac{5}{8}$ in.	3-4 ft. $\frac{3}{8}$ - $\frac{1}{2}$ in.
Bartlett.....		5000	5000	
Garber.....	500	500	500	500
Kieffer, 10000, 5 to 6 ft., 1 year				
Kieffer, 10000, 4 to 5 ft., 1 year				
Kieffer, 10000, 3 to 4 ft., 1 year				

CHERRY—two year

	5-6 ft. $\frac{3}{4}$ -in.	4-5 ft. $\frac{5}{8}$ -in.	3-4 ft. $\frac{1}{2}$ -in.	2-3 ft. $\frac{3}{8}$ -in.
Baldwin.....	200	200	200	200
Early Richmond.....	5000	10000	5000	2000
English Morello.....	100	100	100	100
Montmorency.....	3000	3000	2000	2000

PLUM—two year

	6-7 ft. 1 in.	5-6 ft. $\frac{3}{4}$ -1 in.	4-5 ft. $\frac{5}{8}$ - $\frac{3}{4}$ in.	3-4 ft. $\frac{1}{2}$ - $\frac{5}{8}$ in.
Barbank.....	200	500	500	300
Wickson.....	1000	1500	1500	500

GRAPE—two-year transplanted

Concord.....	90000
Moore's Early.....	30000

CALIFORNIA PRIVET

1000, 7 to 8 ft.	50000, 2 to 3 ft.
2000, 6 to 7 ft.	50000, 18 to 24 in.
10000, 5 to 6 ft.	50000, 12 to 18 in.
20000, 4 to 5 ft.	10000, 6 to 12 in.

DECIDUOUS TREES AND SHRUBS


American Elm—	
50, 8 to 10 ft. high, 1 $\frac{1}{4}$ in. diameter	
1000, 6 to 7 ft. high, 1 in. diameter	

PRICES QUOTED ON APPLICATION WHERE NOT GIVEN HERE.


To assure the best of the stock offered in this list, we recommend placing orders early.

Harrison's Nurseries
J.G. HARRISON & SONS PROPRIETORS
BERLIN MARYLAND

Designed and written by The McFarland Publicity Service, Harrisburg, Pa.



THE NATIONAL NURSERYMAN



JULY, 1911

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

THE MONROE NURSERY

Established 1847.

OFFER A GENERAL LINE OF

Choice Nursery Stock

CHERRY and STD. PEAR

of Extra Fine Quality.

If you are in the market for superior trees write
us for prices.

I. E. Ilgenfritz' Sons Co.
MONROE, MICH.

Mount Arbor Nurseries

E. S. WELCH, Proprietor

Shenandoah, Iowa

Make a Specialty of a Full Line of
General Nursery Stock for the
Wholesale Trade

Large Stock of

FRUIT TREES

SMALL FRUITS

CHERRY

APPLE SEEDLINGS

FOREST TREE SEEDLINGS

CALIFORNIA PRIVET

ROSES AND ORNAMENTALS

ALWAYS PLEASED TO QUOTE PRICES

EVERGREENS

OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
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Complete assortment of Fruit and Ornamental
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1500 Acres

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Fruit Stocks, Apple, Pear, Mahaleb, Myrobolan, Mazzard, Quince, etc. Also full line of Ornaments suitable for lining out. Best packing and grading.

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CYCLONE TILE DITCHER.

Guaranteed to cut 300 rods of tile ditch per day—two feet deep—with six horses. Will save and earn more than its cost every ten days you operate it. This is a big claim; make us prove it before you settle for the machine. One customer writes: "Saved \$100 in four days"; another, "Saved its cost in a few days." We can refer you to some of the leading nurserymen who are owners of, and enthusiastic about our machine. Ask us for full information and booklet. Fall tiling will soon be here.

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Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
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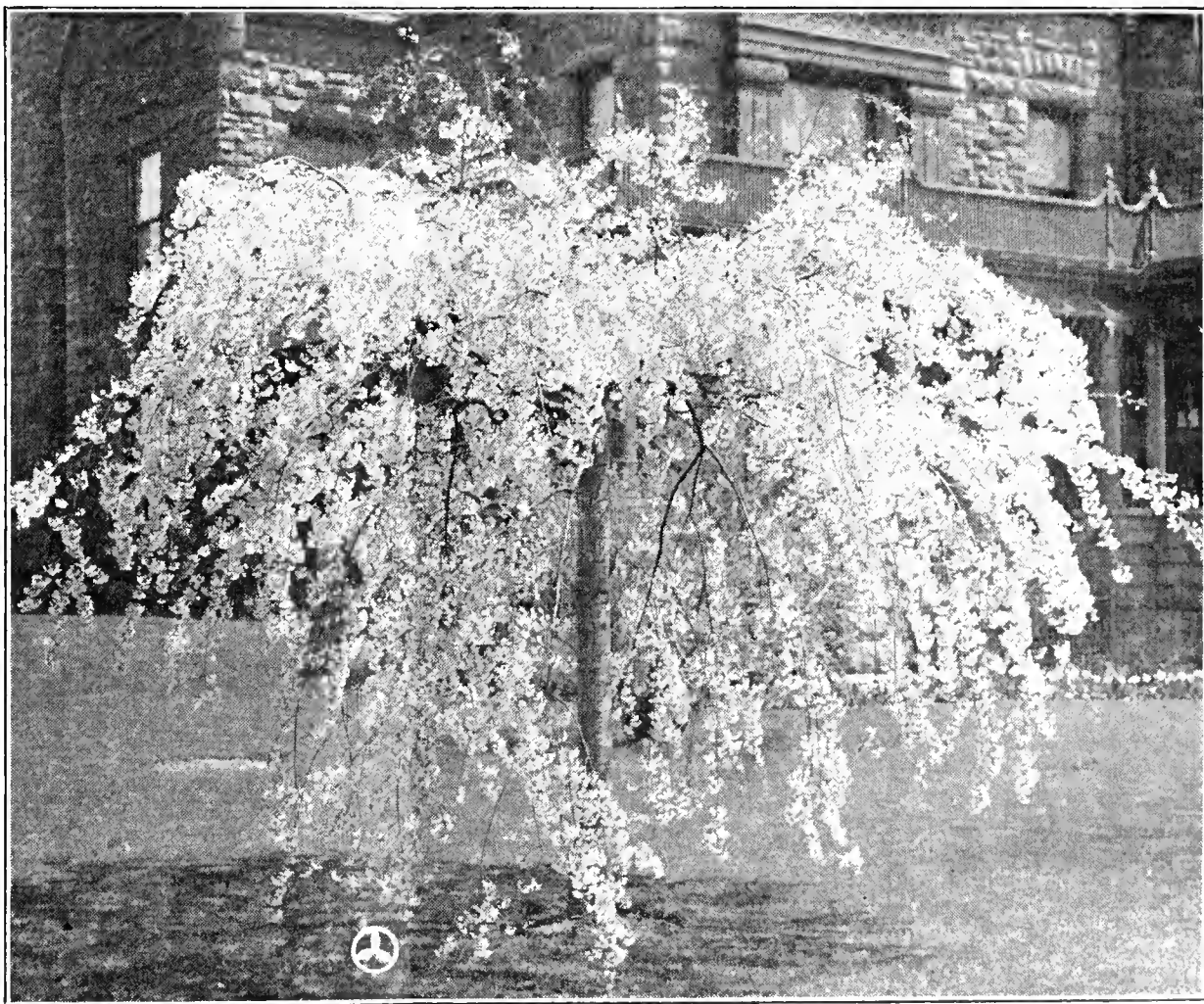
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PEACHES,
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CHERRIES,

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Weeping Mulberries
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No Trouble to Price your List of Wants

55 Years

1200 Acres

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HEMLOCKS AUSTRIAN PINE
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With or Without Ball

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Jackson & Perkins Company

offer to the trade an unusually complete assortment of Fruit and Ornamental Stock, including some things scarce and hard-to-find; their Tree Hydrangeas, Tree Lilacs, Roses, Clematis, Ampelopsis Veitchii, Dwarf Apples, Cherries on Mazzard, and a few other Specialties, have earned for the J & P goods the name of

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Dispensers of The Preferred Stock, grown at
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APPLE QUINCE PEAR CHERRY
PEACH PLUM

A Fine Block of
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ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
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PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

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63 Years

700 Acres

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It pays you to have stock of such high quality as Berckman's Southern-grown trees and plants. We ship all over America and to many foreign points. Northern nursery stock cannot approach the splendid vigorous growth—the demands of our customers prove this.

PEACH TREES. All finest commercial sorts; absolutely true to name and free from disease. No cheap, inferior trees sold. All sizes. **ENGLISH WALNUT TREES.** Excellent quality. All size trees. **AUCUBAS.** Choice grown stock; best variety; all sizes of bushy and well-branched plants. **AZALEA INDICA.** 15,000 home-grown plants and plenty of imported stock. **OLEA FRAGRANS.** A most desirable, fragrant, flowering shrub for Southern gardens and Northern florists. **MAGNOLIA FUSCATA.** Various sizes in field grown and pot plants. **HEDGE PLANTS:** We have a large stock of **CITRUS TRIFOLIATA** and **AMOR RIVER PRIVET (TRUE)**. **CONIFERS** of special merit: **BIOTA AUREA NANA** (Berckman's Dwarf Golden Arborvitea), **B. CONSPICUA**, **B. JAPONICA FILIFORMIS**, **CUPRESSUS LAWSONIANA**, **C. PYRAMIDALIS** and **RETINOSPORA**.

We have the largest and most varied collection of Conifers in the South. A fine assortment of large specimens for immediate display. Write for prices on any of the above stock. Get our trade list and descriptive catalogue telling about our full line of Ornamentals, Fruits and Nuts. Your trade will appreciate the quality of Berckmans' stock. Real trade builders.

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Established 1856 Augusta, Georgia
Over 450 Acres in Nurseries

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By BENJAMIN MINGE DUGGAR

Professor of Plant Physiology in Cornell University

This book is designed to serve as a substantial reference book and is the result of special experience in the study of the practical aspects of plant pathology. There is a comprehensive discussion of the chief fungous diseases of cultivated and familiar plants.

Each disease is discussed with reference to its occurrence, the nature of the lesions or processes induced, the structure, life history, and cultural relations of the casual fungus, and practical methods for prevention or control.

The literature of the subject is freely cited, and a host index provides a ready reference to all of the important fungous diseases occurring upon any host. The method of treatment followed is intended to facilitate and stimulate the work of the nurseryman and practical fruit grower and to enlarge the interests of the general reader. The book is very fully illustrated from photographs and from drawings especially made for this work.

8 vo. 508 pages, Illustrated.

\$2.40. Trade Edition.

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LARGE STOCK, BOTH SEEDLINGS AND TRANS-PLANTS, OF

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PINES
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ARBOR VITAE
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FOREST TREE SEEDLINGS

IMMENSE STOCK OF SEEDLINGS AS FOLLOWS:

CATALPA SPECIOSA
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LINDENS
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EUROP. LARCH
WILD BLACK CHERRY

*Advance Price List of Evergreen and Forest Tree Seedlings
now Ready*

D. HILL

EVERGREEN SPECIALIST

DUNDEE, ILLINOIS

C. M. HOBBS & SONS

BRIDGEPORT, IND.

APPLE—1, 2 and 3 year in leading sorts.

CHERRY—1 and 2 year fine stock.

PEAR—1 and 2 year in leading sorts.

PLUM—1 and 2 year Japan, European and native sorts.

PEACH—1 year leading sorts.

PRIVET—1 and 2 year fine stock.

SHADE TREES in car load lots Norway Maple, American Elm, Box Elder, Silver Maple, etc.

We also have a general line of other stock not mentioned above.

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We Offer the Wholesale Trade for Early Fall Delivery

CHERRY, 1 inch up, $\frac{3}{4}$ to 1 inch, $\frac{5}{8}$ to $\frac{3}{4}$ inch, and all under grades. Our surplus of 75,000 Cherry are first class in every particular.

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PEACH, PLUM, APRICOT, ALMOND, one year, mostly heavy grades.

PEAR, all grades, large surplus.

ONE HUNDRED THOUSAND 2-year, heavy California Privet. Special quotations in 50,000 lots. If in the market let us quote you.

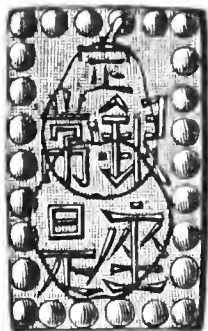
Want 200 bushel of Peach Seed.

WAXAHACHIE NURSERY CO.

J. R. MAYHEW, President

WAXAHACHIE, TEXAS

Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries
Huntsville, Ala.

JESSIE S. MOSS, Prop.

We offer for Fall of 1911 and Spring of 1912 in large quantities as usual:

SPECIALTIES

APPLES—Commercial varieties, one year, in large supply.
As fine in quality as ever grown.

PEARS—Kieffers, one and two years old. A much smaller crop than heretofore.

CHERRIES—On Mazzard. One year. Bing, Lambert, Napoleon, Black Tartarian.

CHERRIES—On Mahaleb. One and two years. Ea. Richmond, Dyehouse, Montmorency, Wragg, Royal Duke, in small supply.

PEACHES—We excel in Peaches, and of these we will have as fine a stock as we have ever grown, both in one year and June Buds.

ROSES—Budded. We will have a large and fine stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.

PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.

MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

See Price List for particulars.

Address, W. F. HEIKES, Manager,
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Have you seen and examined the quality and finish of our

Rawhide Brand of Shipping Tags and Tree Labels

printed or plain, strung or wired?



This stock is especially adapted to the most severe usage, being thoroughly waterproof & weather-proof. "Once used, always used."

Send for samples and prices. Our reference are the largest nursery men in the United States.

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WEST CHESTER, PENNSYLVANIA

RED STAR RAFFIA

The most satisfactory brand on the market.

It is a guaranteed quality at
a reasonable price.

NURSEYMEN RECOMMEND IT.

Budding time is here. If you need a new supply of Raffia this season, now is the time to order. When ordering keep in mind that to have the best success with your budding, good Raffia is necessary. "Red Star" Brand is the best for this work. Order it and you will be assured of satisfaction.

THOMAS MEEHAN & SONS

Direct Importers of Raffia,

DRESHER, near Philadelphia, PA.

BOBBINK & ATKINS

WORLD'S CHOICEST NURSERY PRODUCTS

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| ROSES, in all kinds and varieties | PALMS and BAY TREES by the thousands |
| EVERGREENS and CONIFERS, in several hundred kinds and varieties | Pot-grown FORCING PLANTS, Autumn Delivery |
| RHODODENDRONS, Hardy, ENGLISH HYBRIDS, Maximum and Catawbiense | FRUIT-TREES, home-grown, imported, DWARF and TRAINED |
| BOXWOOD, in all shapes, forms and sizes | SMALL FRUIT, in all kinds and varieties |
| HARDY AZALEAS, in all varieties and colors | NUT TREES, profitable kinds |
| FLOWERING SHRUBS, in bush and standard forms in hundreds of kinds and varieties | OLD-FASHIONED, Hardy FLOWERING PLANTS, in thousands of kinds and varieties |
| JAPANESE MAPLE, in all colors and varieties | PAEONIAS, IRIS, PHLOX, FERNS, HARDY GRASS |
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| HEDGE PLANTS, in all popular kinds | Interior and Exterior DECORATIVE PLANTS, in large variety |
| HARDY TRAILING VINES and CLIMBERS | VISITORS to our nurseries are always welcome |
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We have genuine Catalpa Speciosa and Black Locust in large quantities. You cannot afford to buy before getting our quotation, it will pay you.

Are now ready to quote you.

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We have a splendid stock of

Grape Vines

and other small fruit plants for the Nursery trade, graded up to the highest standard and sure to please you.

Give us a trial order, send in your list now for quotations

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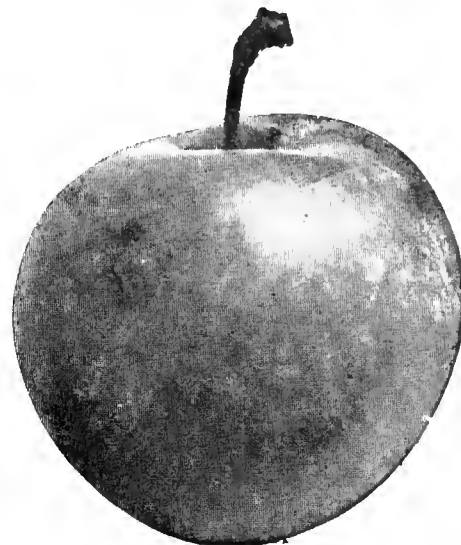
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∴ FLOWERING SHRUBS ∴
APPLE AND PEAR SEEDLING
∴ FOREST TREE SEEDLING ∴

Established 1865

150 Acres

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**MALONEY BROS.
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Offer strictly hardy up-land grown trees guaranteed true to name and free from scale, a good assortment of the following:

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| 2 " Japan Plum | 3 " Std. Apple Grafts |
| 2 " Sour Cherry | 1 " Quince |
| 2 " Sweet Cherry | 1 " Japan Plum |
| 2 " Standard Pear | 2 " Carolina Poplars |

Carefully selected buds for budding furnished at a reasonable price.

Personal attention given to each and every order.

Let us price your list of wants. We will save you money.

Secure your trees and buds from a section where San Jose Scale has never been found.

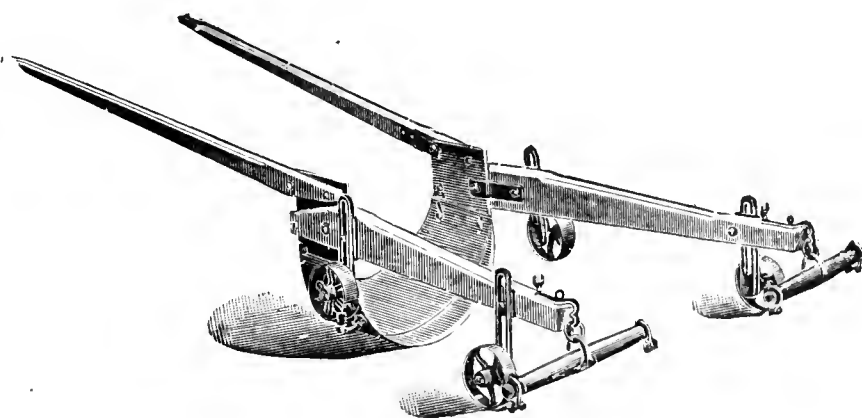
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BRAGG'S

COMMON SENSE

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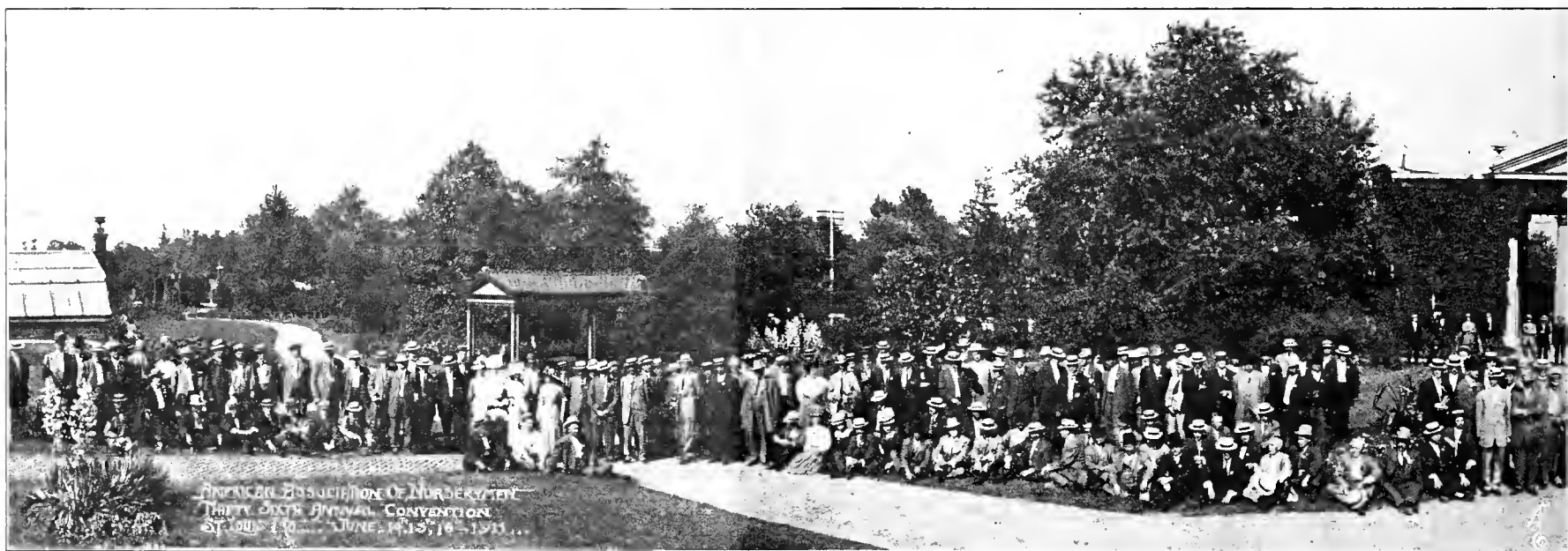
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Digger gets all the roots at the rate of 20 to 40 thousand trees per day, and only needs same power as plow.

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AT ST. LOUIS BOTANICAL GARDENS

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XIX.

ROCHESTER, N. Y., JULY, 1911

No. 7

THE ST. LOUIS CONVENTION

An Excellent Meeting. Important Legislative Action. President Stark's Address a Notable Paper.

John H. Dayton Elected President.

President Stark called the meeting to order at ten o'clock, on Wednesday, the 14th, and presented Mayor Kreismann to the convention, who, without preamble, straightway welcomed the nurserymen to the city, told them to behave themselves, and have a good time. The Mayor evidently recognized the character of the nurseryman's business; for he paid a tribute to his ability as an intensive cultivator, and he was certainly right there, for the nurseryman is the most intensive farmer we have, the florist alone excepted. He congratulated the nurseryman also in bringing rain to the parched land of the Middle West. Fortunate it was too for the nurserymen that the rain had come, according to reports of high temperatures of previous days which were freely circulated in the corridors.

RESPONSE BY J. W. HILL

With his usual facility of vocabulary and voice, assisted by his six feet two of height and 250 pounds of avoirdupois, Mr. Hill proceeded to acknowledge the felicitations of the Mayor. He returned compliments in his usual graceful fashion, and congratulated the Mayor in presiding over such a progressive city, a city noted as a world's fair maker, as the home of such public spirited men as Henry Shaw, Messrs. Anheuser-Busch, and others.

Mr. Hill drew attention to the fact that this was truly a national convention, and that solid delegations were to be found representing the plains of Kansas, the hills of New England, and the fertile valleys of New York. He further emphasized the fact that in the ranks of the nurserymen were veteran plant growers, whose names would always be linked with the progress of horticulture in the country at large. These were men who in former days had placed their best services and best energies at the disposal of the government in the days when there was striving for the unity of the nation. Among these were Captains Watrous and Kirkpatrick of Iowa and Texas, Van Lindley of North Carolina,

and many others who had grown grey in the great cause of plant industry.

Mr. Hill took further occasion to emphasize the importance of the nursery interests of the country by citing that there were over 2300 nurseries in the United States aggregating a capital of \$30,000,000, turning out an annual product valued at, at least \$15,000,000, and employing labor to the amount of three or four million dollars per annum. He closed with a strong statement of the place of the nurserymen in the economy of the country, as affecting its material, esthetic, and moral welfare.



J. H. Dayton, Pres. American Association of Nurserymen.

PRESIDENT STARK'S ADDRESS

The address of President Stark was truly a notable one. It was analytic, and at the same time comprehensive. It was practical, but also inspiring and suggestive. Above all it was a temperate consideration of the nurseryman in his local relations, as well as in his relations with state officials and governmental institutions.

Among the subjects treated by President Stark were the burning questions of grades and grading, the importance of which was recognized by the Association to the extent of appointing a special committee to report upon it another season. Among other topics was the whole question of state and federal inspection laws. He impressed upon the nurserymen the desirability, nay, the necessity, of improving the standards of quality in the production of stock. Let the ideal be constantly to produce better grades, not forgetting that with the improvement in quality there should be corresponding increase in price. He pointed out that our standards at the present time governing grades and quality were very elastic. They were not uniformly recognized. Indeed, our standards themselves were not well established, and therefore, it was not surprising that they were not lived up to.

Other topics covered by President Stark were civic improvement, forestry, publicity, and trade co-operation.

He raised the question as to the desirability of increasing the membership fee, and he also queried whether a change of time of meeting would not be desirable. The address was referred to a committee, appointed especially to consider the main recommendations, and this committee reported as follows:

REPORT OF COMMITTEE ON PRESIDENT'S ADDRESS

Your Committee beg to compliment the President on his exhaustive and masterly treatment of the various subjects which affect the business of the Nurserymen, and present the following recommendations for action by the Association:

Inspection Laws—These have been covered very com-

mend any change in the amount of the membership fee under existing circumstances.

Publicity—Your Committee favor the principles of publicity as outlined by President Stark, but are of the opinion that the finances of the Association will not permit a satisfactory campaign being carried on at the present time. We commend the subject to the careful consideration of the Executive Committee.

J. S. KERR,
JOHN CRAIG,
J. H. SKINNER.

ADDRESS BY THE FIRST SECRETARY OF AGRICULTURE, HON. NORMAN J. COLEMAN

The meeting was favored by the presence of the veteran,



A PORTION OF VISITING DELEGATION OF NURSERYMEN AT SHAW GARDENS

pletely by the subsequent reports of the Committees on Legislation, and there is nothing to recommend.

Grades and Grading—The Committee appreciate the importance of this subject, as discussed by President Stark, and believe that it should be constantly kept before the Association until it is brought into satisfactory standardized form.

Time of Meeting—Your Committee recognizing the great importance of this matter, would recommend the appointment by the Association, through its President, of a special committee to consider the matter in all its bearings, especially asking the co-operation of the State vice-presidents, with a view of offering a recommendation or report on the subject at our next annual meeting.

Membership Fee—Your Committee are unable to recom-

Norman J. Coleman, first Federal Secretary of Agriculture, ex-governor of Missouri, and at present and for a number of years editor of *Coleman's Rural World*. Mr. Coleman is a man of 85 years of age, but still active in body and clear in mind. He contrasted conditions of the nineteenth and twentieth centuries as discovered by the sweep of his experience, and drew attention to the vastly improved conditions of agriculture of today, both in its organized form and in its individual expression on the farms, over those obtaining a half a century ago. Mr. Coleman's presence was greeted with great applause. He was an interested attendant at several sessions, joined the Association on its excursion to Shaw Gardens, and attended the Shaw banquet on Thursday evening.

SECRETARY'S REPORT

Secretary John Hall departed from the conventional and beaten track of his predecessors in office, who usually offered only a statistical report of membership and finance, by showing where the membership of the Association was congregated and by giving an interesting sketch of the lifework of several members of the Association who had passed away during the year. The membership showed an increase over last year.

TREASURER'S REPORT

This showed a substantial balance on the right side of the ledger, and in view of this, and following the recommendation of the President, the legislative committee were given permission to expend money in making certain test cases of the constitutionality of drastic laws now in force, governing the import of nursery stock into some of our western states.

decided not to use it. His verbal report disclosed the condition that any advertising which would be effective must of necessity entail the expenditure of a considerable sum of money. It did not appear at the present time that the Association was in a financial condition which would warrant the undertaking of a very expensive publicity campaign.

Trade Opportunities—Mr. Thomas, chairman of this committee, made a verbal report in which he recommended that the committees on trade opportunity and publicity be combined, and that a sufficient sum of money to wage an aggressive, effective campaign be set aside for the use of this committee. The report of the committee was received, but no definite action was taken thereon.

LEGISLATIVE COMMITTEE

Owing to the importance of this committee's report, it was



THE BROWNS AND HARRISONS, A NEBRASKA DELEGATION AT SHAW GARDENS

TRANSPORTATION COMMITTEE

This report was presented by Mr. Charles Sizemore, in charge of transportation in the Stark Brothers Nurseries & Orchards Company. The report was given on behalf of Mr. D. S. Lake, chairman of the committee. The report appears elsewhere.

Chairman Irving Rouse of the tariff committee presented no formal report, inasmuch as nothing of special importance had come up affecting tariff schedules, which had not been reported in the columns of THE NATIONAL NURSERYMAN.

The following committees had no definite or specific report to make: Co-operation with entomologists, J. W. Hill; The work of this committee hinged upon the passage of a federal inspection bill which had not taken place, and therefore, the need for any action arising out of the passage of such bill had not been made necessary.

Publicity—Chairman Orlando Harrison reported that the sum of \$500 which had been placed at the disposal of this committee was found to be insufficient to do any effective work, and therefore, rather than spend it to no purpose, he had

put over until the second session, so that it might receive careful consideration by the full membership present. Chairman Pitkin's report on behalf of this committee contained a detailed recital of the history of the various attempts at federal inspection which had been made up to the present time, either at the dictation of the United States Bureau of Entomology, or by the nurserymen themselves. The burden of the responsibility for the failure of the passage of a federal inspection bill, according to the statement of Chairman Pitkin, rests upon the shoulders of the officials of the Bureau of Entomology of the United States Department of Agriculture. It would seem, putting it in a very mild form, that there was a decided lack of diplomacy on the part of these gentlemen in their dealings with the nurserymen, and no apparent effort has been made by them to meet the nurserymen half way in an effort to consider the proposed measure. This is set forth very fully in Chairman Pitkin's report, which appears elsewhere.

In this report and the resolution which follows, the committee places itself squarely on record as favoring an inspec-

tion bill which is workable, and which would properly safeguard the plant interests of the country. Owing to the unfortunate attitude of the Bureau of Entomology, the nurserymen of the country do not feel themselves able to place under its control the entire import business of the country by giving the Bureau authority to quarantine summarily, at will and without recourse, any shipment, or any foreign or domestic district or region. It would appear that this condition might have been avoided, had due effort been made by the Washington authorities to meet the nurserymen and squarely and frankly discuss the situation in all its bearings.

INTERSTATE LEGISLATION

Considerable discussion arose upon the subject of testing state laws which, on account of their arbitrary and drastic character, raised the question of their constitutionality. It was resolved that the executive committee be authorized to appropriate such sum or sums as may be necessary to test certain of these arbitrary state laws. Among these were the laws of Wyoming, Colorado and Montana. Probably other states will be included.

ROOT GALL COMMITTEE

E. A. SMITH, Chairman

Another interesting report was presented by Chairman Smith representing this committee. It will be remembered that the report of Mr. Smith, who is secretary of the Jewell Nursery Co., of Lake City, Minn., presented at the Denver meeting, was a notable review of our knowledge of this subject. In the report presented at St. Louis, he called attention to the bulletin issued by Dr. Erwin F. Smith, of the Department of Agriculture at Washington, in which bacteria are credited with being the cause of root galls of apple, peach, rose, raspberry and many other plants. Mr. Smith recommended making a test case of the Reed shipment into Colorado, with a view of ascertaining the constitutionality of the inspector's action in destroying this carload of stock, on the score that part of it was infested with crown gall.

Mr. Smith further suggested that a broad series of experiments should be established on the home grounds of nurserymen and between the nurserymen and the state officials qualified and authorized to study it cooperatively. It was pointed out that no one experiment could settle this question, but that it could only be settled and settled satisfactorily in terms of broad averages. These averages could only be obtained through the general interest of nurserymen in the subject. If several nurserymen in each state would agree to make a test of crown gall trees by setting out a small tract of infested trees, as Mr. Abner Hoopes, Mr. Youngers, Mr. Smith of Minnesota, and Mr. Stuart of New York have done,

we would in a short time secure a large mass of information which must be regarded as conclusive.

PAPERS AND DISCUSSIONS

These were largely crowded into Friday morning's session. Most of them had the virtue of brevity, and nearly all were very much to the point. Professor Hunter of Kansas presented a strong plea for closer co-operation between the entomologists and the nurserymen. He pointed out that they were mutually interdependent, and therefore, should work together.

Professor Whitten of Missouri gave the results of several years' experiments in fall and spring planting. His general conclusions were that the farther north one goes, the more should we depend upon spring as the best time for planting, and vice versa. Again, the hardier the plant, the more likely was it to succeed if planted in the fall. As to time of fall planting, he advised early instead of late planting, as giving best results.

A feature of the convention was the number of papers on practical topics such as grades and grading, mailing lists, trade lists, and so forth. These will be presented in early issues of THE NATIONAL NURSERYMAN.

EXHIBITS

The exhibits as a whole were considerably smaller than in previous years. It is hard to say why they should have fallen off; for there was an excellent opportunity of displaying them, and St. Louis was sufficiently central so that they could be shipped with relatively small expense. The catalogue and lithograph firms were well represented, and made notable displays, but the nursery products themselves were scanty. The following exhibits were worthy of note:

St. Louis Cordage Mills, a full line of sisal products, including tying material in various sizes.

Jackson & Perkins, Newark, N. Y., specimens of ornamental trees, shade trees, fruit trees, and small fruits.

J. G. Harrison & Sons, Berlin, Md., a good display of conifers, privets and shrubs.

Rochester Lithographing Co., a first rate display of book plates and photographs.

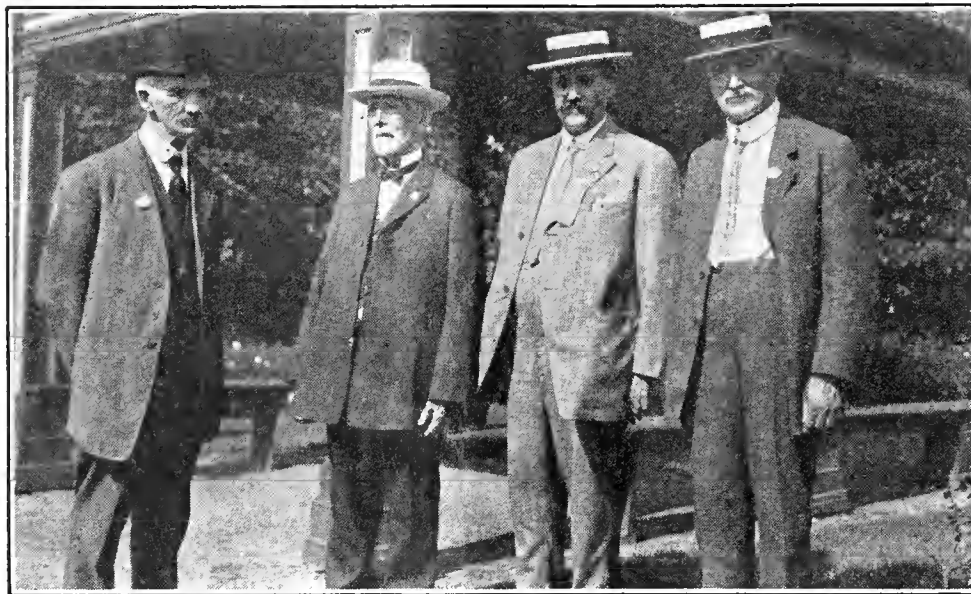
D. Hill, Dundee, Ill., our noted evergreen specialist, showed a fine collection of balled conifers.

The Stecher Lithographing Co., Rochester, N. Y., collection of plates and order books.

Perfection Manufacturing Co., Detroit, Mich., full line of pot and tree labels.

The Fruit Grower Co., St. Jo, Mo., a line of catalogues and guide books for the amateur fruit grower.

Allen-Bailey Co., Dansville, N. Y., garden stakes, tree labels, and pot labels in variety.



Lewis Roesch Hon. Norman J. Coleman Frank Weber E. G. Hill
A DISTINGUISHED QUARTETTE

Austin Nursery Co., Austin, Texas, a handsome collection of pecan nuts.

Thomas Meehan & Sons, Dreshertown, Pa., red star raffia, and the Meehan caliper.

Deming & Co., of Salem, Ohio, spray pumps and their accessories.

Grasselli Co., St. Louis, Cincinnati, and New York, full line of insecticides and fungicides.

B. G. Pratt Co., New York, scalecide, sulfocide, etc.

Homer C. Reed, Louisiana, Mo., graft wrapper, continuously demonstrated.

Clinton Falls Nursery Co., Owattona, Minn., the Cashman trencher, illustrated by models, the Cashman hoe, illustrated by a model.

National Nurseryman Co., Rochester, display of printed material, journals, and special publications.

Thomas A. MacBeth, Springfield, Ohio, collection of ornamentals.

Wild Brothers Co., Sarcoxie, Mo., collection of peony blooms.

Dayton Fruit Tree Label Co., Dayton, Ohio, full line of tree and pot labels.

W. N. Scarff, New Carlisle, Ohio, attractive collection of bush fruits, including raspberries and blackberries.

E. A. Riehl, Alton, Ill., collection of fruiting branches of new varieties of orchard fruits.

Fountain Cutlery Co., Philadelphia, hedgeclipping shears.

J. Horace McFarland, Harrisburg, Pa., nursery printed supplies, photographs, lithographs, and so forth.

A. B. Morse Co., St. Joseph, Mich., catalogues, photographs, and so forth.

ENTERTAINMENT FEATURES.

It is unnecessary to say that Chairman Frank A. Weber succeeded in pulling off the entertainment features with credit to himself and great satisfaction to the members of the Association. He has repeatedly proved his ability in this line, and the members felt sure of their ground in this department when they realized that Frank Weber was in charge. He was ably assisted by his brothers and Mr. Weber, Sr. They were all "on the job," they were all generous of their time and energy, and ever courteous. The entertainment features, as outlined in the last number of THE NATIONAL NURSERYMAN, were carried out in detail without a hitch, and on time. The excursions started when they said they would start, and returned at the time called for by the schedule. The hearty thanks of the Association were tendered to Messrs. Weber and certainly were richly deserved.

EXCURSION TO MISSOURI BOTANICAL GARDEN

This institution, known as Shaw Garden, founded by Henry Shaw, an Englishman who settled in St. Louis more than half a century ago, and who left the bulk of his estate as an endowment fund for this educational enterprise, proved to be a place of great interest to the nurserymen. The trip was made by street car; the visitors were received by Professor H. C. Irish in the absence of Director Trelease. After having a group picture taken, which appears in this issue of THE

NATIONAL NURSERYMAN, the visitors to the number of three or four hundred strolled around the gardens, visited the greenhouses, studied the aquatic plants, the dry land plants, of which there is a marvelous collection, examined the trees of American origin, or made a cursory acquaintance with the plants of the tropics, and then came away in a couple of hours, feeling that it would take more than an afternoon to feel at home among a plant population where more than 20,000 were strangers or known only by relationship. Shaw Gardens covers about 160 acres, of which practically two-thirds has been cultivated and improved.

VISIT TO THE ANHEUSER-BUSCH ESTABLISHMENT

The Association went out about 300 strong, accompanied by the "Rochester chanters," to this establishment. We have not drawn any special attention to this noted musical aggregation on account of the well known modesty of its members, but for ability to evolve appropriate ditties on short notice, it is safe to say that they would take a high place in a competi-

tive contest in the field of originality. Under the leadership of Eddie Osborne, the street corners were enlivened, the street cars almost electrified, and the officers and employees of the Anheuser-Busch establishment greatly "edified" by the presence of the leader and the efforts of the choir.



THE "ROCHESTER CHANTERS" SERENADING VICE-PRESIDENT WYMAN

to and in the Hotel rotunda after returning from the Anheuser-Busch establishment:

IMPROMPTU ODES

Composed and rendered by the ROCHESTER CHANTERS, Led by Eddie Osborne.

The following adaptations were rendered on the way

J. H. D.

(Tune: "Hot Time in the Old Town ToNight")

J. H. D. He came to town today.

J. H. D. He knew just what to say,

And when the time came to vote

He got the other fellows' goat

There'll be a hot time in the old town tonight.

Old John Watson is a good old soul,

Old John Watson is a good old soul,

Old John Watson is a good old soul,

And he knows what to say

When his friend's in a hole.

VICE-PRESIDENT'S ODE

(Tune: "Home Sweet Home")

When we go to Boston

We'll eat Pork and Beans

We'll be just like angels

As good as ever were seen

We won't see a bar room

Or drink a dry Martine

We'll drink pure water

Cause Wyman says its clean.

PAPA JOSSELYN

(Tune: "Auld Lang Syne")

Should Old Pop Josselyn be forgot
And nothing said of him
Should old Pop Josselyn be forgot
The man of Grape Vine fame.
The man of Grape Vine fame.
We'll take a cup and drink it up
And wish him best of luck.

(Tune: "Tammany")

Pilkington! Pilkington!
He is from old Oregon
He's a sport and always on.
Pilkington! Pilkington!
Liar! Liar! Liar! Liar!
Pilkington!!

E. S. OSBORNE,
J. M. PITKIN,
ROBERT CHASE,
JOHN H. DAYTON,
WILLIAM PITKIN,
M. B. FOX,
J. W. PILKINGTON,

THOMAS B. MEEHAN,
HORACE HOOKER,
W. E. CAMPBELL,
HENRY B. CHASE,
CHAS. L. YATES,
ROBERT CHASE

The Chanters.

The Anheuser-Busch establishment affords an example of the possibilities of organization. The mechanical appliances in operation and the system which prevails within and without are evidence of much thought and study.

THE SHAW BANQUET

The Director of the Botanic Garden was good enough to extend a general invitation to the nurserymen to attend the annual banquet provided for by the will of Henry Shaw, to the florists, nurserymen, and plantmen of St. Louis, and vicinity. This banquet is of a perennial character, and will go on indefinitely. It ensures an annual social function for the gardeners, florists, and nurserymen of St. Louis and vicinity. Between three and four hundred persons sat down and enjoyed a first-class dinner, and then listened to speeches and toasts bearing upon the function and purpose of the garden, educationally and industrially. Incidentally, representatives from the parks and city administration responded to toasts and outlined plans which were in the making for the improvement of the city of St. Louis.

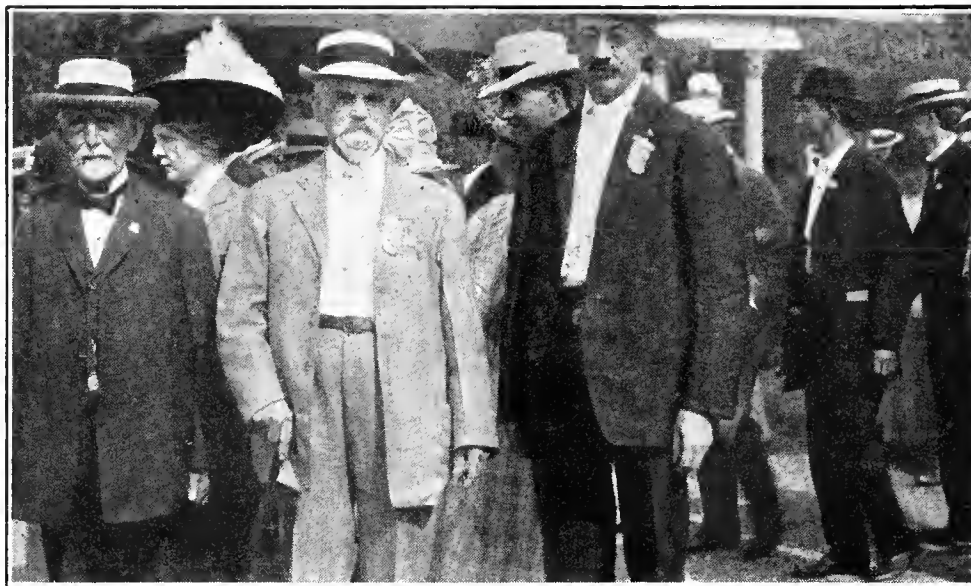
Mr. J. H. Dayton responded for the nurserymen, and impressed the thought that the nurserymen's calling was one which involved not only fortitude, but intelligence and perseverance, for his path was not always strewn with roses, nor did fortune always smile upon him. Mr. Dayton's effort greatly pleased his brethren, and impressed the belief that they had a man who would worthily represent them in that seat of learning, Boston, where the Association is to meet

next year. Mr. J. W. Hill dilated upon the opportunities of the nurseryman in the field of æsthetics as well as economics.

OFFICERS AND PLACE OF MEETING

The fact that it is possible for the vice-presidents to fail to represent the will of the meeting was illustrated by the development of a friendly contest for the presidency following the presentation of their report. This contest resulted in the election of Mr. J. H. Dayton of the Storrs & Harrison Company, Painesville, Ohio, for president. The rank and file recognized in Mr. Dayton a man who had rendered long and faithful service to the Association. A feature of the election campaign was the speech of John Watson of the Jackson & Perkins Company, Newark, in placing Mr. Dayton in nomination. It was a sample of serious, solemn oratory, delivered with deep fervor, and it carried the day. Mr. Wyman was then elected vice-president, so that New England is properly represented in the session of the society to be held in historic Boston. Secretary Hall and Treasurer Yates succeed themselves.

For place of meeting Philadelphia and Boston ran a neck and neck race. Thomas B. Meehan of the city of the gigantic "pen holder" championed his home town, while various persons spoke in favor of Boston, which finally won out. As it was pointed out by several persons, it is altogether likely that if the meeting is held in Boston, Philadelphia will still be on the map, and Philadelphia may expect a number of callers, either going to or returning from the convention city.



Hon. Norman J. Coleman Secy. John Hall Pres. W. P. Stark
AT SHAW GARDENS

ECHOES OF THE CONVENTION

The driest, hottest May on record was the general opinion expressed. There was hardly a wet spot during May in the whole country northeast of the Gulf. The important effect of this seems to be the promise of short crops. Reports from all parts indicate exceptional dryness and heat.

"We expect a poor stand of apples," says one. "Our cherry stand is very much below par," says another. "Established stock doing fairly well, small stuff badly hit," says a third.

Veteran nurserymen present! Among the familiar faces and figures were Capt. C. L. Watrous of Des Moines, E. S. Kirkpatrick of McKinney, Texas, Abner Hoopes, West Chester, Pa., J. Van Lindley, Pomona, N. C., W. T. Hood, Richmond, Va., George S. Josselyn, Fredonia, N. Y., John C. Chase, Derry, N. H. These are of the old guard and always faithful.

"Papa" Josselyn returns from the convention and strikes immediately for the Canadian woods to enjoy a fishing bout.

W. P. STARK'S ADDRESS

A Masterly Review: Many Suggestions.

Restlessness, mutability, alternating fluctuation, transiency, mobility, but development withal. These are the keynotes of the world—and the loud pedal has been used especially to emphasize them in the nursery business the past few seasons.

There is a new hand wielding the gavel each spring; old names are passing and new ones being added to the roll each year. Old friends are moving across the Jordan to work in the gardens beyond.

The knowledge of science is being brought to bear on all phases of propagation. Business conditions are progressing; the present system of credit and trust has made possible the wonderful development of business as we know it today. A new element has been growing and developing. This new element in business is world-old and its greatest advocate is the "Man of sorrows," who moved the sodden world by his force of character and simple truths so plainly told that to this day we have not understood or realized the full meaning of them all.

I speak of this as a new element and it may be regarded as such in business where competition and co-operation were foreign to each other, where a competitor was an enemy. This spirit of fraternity, of mutual help, of pulling together was not thought possible in the business world.

The new order of things has been growing slowly.

The human race develops as a whole and moves very, very deliberately. What each individual does and thinks leaves an imprint on the whole race, though its effect is seldom perceptible.

The change which is becoming so apparent in our own day has been working beneath the surface all the past centuries. Our natures are not undergoing any sudden change; rather we are just coming to a general realization of the fact that competition of the cut-throat type is self-destructive, like war or any disease, and that real competition means the profiting of each in proportion to his efforts in elevating and promoting the business as a whole as well as his own individual interests.

The greatest value of our meetings is the promotion of a spirit of personal friendship, of trust, of getting together and pulling together. It helps us realize and adapt ourselves to the constantly changing conditions which influence each in spite of all efforts to the contrary. Everyone, yes all, must adapt themselves to these changes, else they will be more or less gradually, but none the less certainly set aside, sloughed off, discarded—eliminated by the evolutionary forces of nature.

The primary object of our association is business in its broadest sense, but I wish to repeat and emphasize that the greatest good of our meetings comes from the personal relations made possible, the friendships formed, the business transactions made in person and the discussion of different subjects as a body. Here it should be added that to get best results there should be full attendance and participation at all of the daily meetings.

INSPECTOR AND INSPECTION

We, as a class, are often slow to change—to grasp a new condition; we have given color to some of the charges made against us. But from such teachers and leaders as we have in Missouri—and each state has many such men—there has been nothing but co-operation, assistance, and I might add patience, for these men are usually the first to recognize the relation between theory and practice. On the other hand, it is necessary to say that while these men are representatives, all men in the government employ are not of this stamp. For lack of funds the states

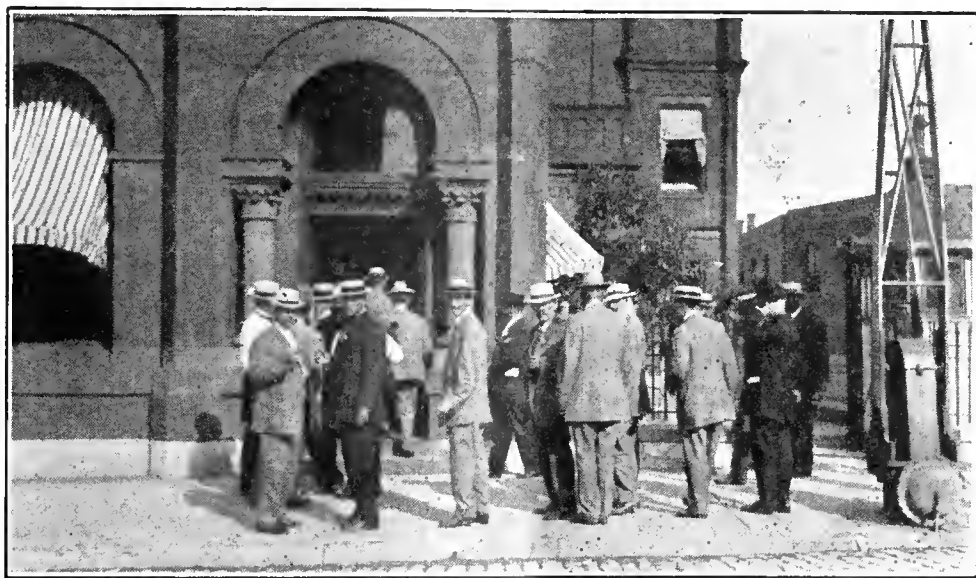
are sometimes forced to appoint inefficient men, or to give one man more territory than he can properly cover. Some of the smaller men, in a few cases, have misused their offices and this has given rise directly and indirectly to a deal of hard feeling.

Politics have been allowed to interfere in this as in other things, hindering the work of the officials and causing loss to the interests they seek to serve. These are things which should be recognized. The individual success of each depends upon promoting the general welfare of the horticultural public and the nation.

The National Inspection Bill is one of the issues of the day—it affects you. Years ago such measures were discussed by this association. We do not intend to bring up the subject of States' rights versus a centralized form of government at this time. Each has its own part to play in our government. There are some things which must be under the control of the State—there are others which apparently should be governed by the Nation.

Regulation by congress of standard packages or fruit seems a simple matter, yet up to this time they have been unable to adjust it satisfactorily to all concerned. Practical regulation is not as easy as it sometimes seems to be. I personally believe that there are certain phases of protection from injurious insect pests and diseases which are best controlled by the National government, while certain other places must be left to the states. The Simmons Bill as finally proposed was, with the exception of one point, satisfactory to nearly everyone concerned. The handling of this bill was, as stated by a professor of the University of West Virginia, unfortunate throughout. The first drafting called for inspection at port of entry, which was soon proven impracticable if not impossible, and the bill was revised and re-introduced. Further, in speaking of this matter he referred to the way the Insecticide Bill had been prepared and presented. In preparing the Insecticide Bill the interests concerned were first consulted and the manufacturers of insecticides were as hearty in its support as any. While the Insecticide Bill may not be ideal, it is giving manufacturers, as well as the public, good service and is giving it now, today, when it is badly needed.

For some reason the nurserymen as a body were not given a chance to speak either through the Association or individually. Had this been



APPROACHING HEADQUARTERS OF ANHEUSER-BUSCH
ESTABLISHMENT: EXPECTANCY

done the error in the first drafting, at least, would probably have been avoided. [President Stark then called especial attention to sections 8 and 9 of the Simmons Bill which is fully discussed by the committee on Legislation and says:]

This gives one man absolute control of the nursery business directly and of fruit growing indirectly, for the orchardists as a body are dependant upon someone to grow trees for them.

The majority of men in government service are exceptionally broad-minded and public spirited; they are rendering services to the people for less than those services are worth—less than they could demand if their energy and ability were directed to private enterprises. But as stated before, all men are not entirely of this stamp, they are not all broad enough to realize that ultimate success depends upon the ability



W. H. WYMAN
Vice-President

of one department to work in the greatest possible harmony with all others, as well as to attain as great a degree of individual efficiency as possible.

To directly place the control of one large industry and indirectly the control of a far greater one in the hands of one man, in an endeavor to help those industries, is really placing them in danger of a remedy which might prove to be worse than the original trouble. For instance, many conservative investigators believed, after careful study and deliberation, that San José scale would wipe out the fruit growing industry of this nation.

LOOK OUT FOR THE ALARMIST

At the Indianapolis Convention an alarming address was made predicting the devastation of our orchards and forests—everything in the tree line. Dr. Bailey, always rising equal to the occasion, cautioned against undue alarm and with prophetic vision, or may be it was only practical sense, said the pest no doubt would be controlled. He advised moderation and conservatism. During the scale agitation nursery sales were greatly reduced in orchard regions because of unnecessary alarm and dread. But this pest is now readily controlled and is pronounced by some to be a benefit in the same sense that Dr. Bailey stated that weeds were beneficial, for weeds which force the farmer to additional cultivation are a blessing in disguise. The San José scale has made necessary care and spraying which have been highly profitable to the orchardist, but which, perhaps, he would never have done had he not been forced to. Suppose during the spread of this insect, which appeared in nearly every state, shortly after its introduction, one man who had the power to quarantine had checked off and destroyed the industry of raising fruit trees. It would have been years in recovering, and the loss to the country of the orchards which would not have been planted would have been incalculable. It is true that the scale has destroyed many orchards, but the orchardist who will not take the pains to spray

will seldom give attention to pruning and other necessary phases of orchard work.

Laws may be so drastic as to destroy that which they seek to help. Montana, in her legislation has experienced this condition in a mild form and is repealing some of the laws which have directly hindered the production of nursery stock and indirectly the planting of orchards.

We, as nurserymen, need national and state inspection. We should co-operate with those interested to bring about maximum protection with minimum hardship to all concerned. While the nurserymen may lose temporarily, it is the ultimate consumer who foots the bills in the end, whether it be growing trees or making steel rails. It is as Prof. Taylor said at Denver, if the orchardist wants trees free from knots and is willing to pay for them, he should have them—and be charged accordingly.

I have talked plainly on this subject, but unless I am misunderstood I hope to have avoided giving offense, for many of my personal friends are among the nurserymen, professors, experiment station men and inspectors, with whom and their work I have been in touch in many states.

GRADES AND GRADING

There should be uniformity in grades—there should be a recognized standard which means something. It sometimes happens that a car of trees is bought from a grower who professes to be a wholesaler, the specifications are "according to Hoyle," but the trees on arrival prove to be practically worthless, almost rootless and many lifeless. In fact, many growers' grades mean nothing—they are on an elastic standard designed to fit that which they have to sell.

The Western orchardist has set a new mark in packing fancy apples. Their high standard has been attained by rigid rules, strictly adhered to in every phase of the work. The association of one valley does not even allow the orchardist to pack his own fruit. The men in charge realize



J. M. PITKIN
Member Executive Committee

the tendency of human nature, in themselves and others, which often works contrary in spite of good intentions. However, the conditions affecting grades in our case are largely from a different source.

The experienced, bonafide grower generally makes very good grades and a number have built up a national reputation for the high standard of their stock. It is the farmer, real estate man, or others who imagine they will suddenly turn nurserymen who are largely responsible for unstable grades. They secure grafts or stocks and shortly after planting time, begin to calculate the different grades—it looks good to them and they wonder that it is so easy. Why? They can make money at half the market price! The result—when digging time comes—they not only early disregard specifications, but have helped to demoralize prices

and have done this usually without any real profit to themselves. They have had the experience and are through. The trouble is that there is always a new crop coming on to take their places.

LEGISLATION, PAST AND FUTURE

In talking with Canadian friends as to the possibility of closer relationship between the governments of Canada and the United States they mentioned among other things, that we are encumbered with numerous laws which are ineffective or detrimental. A certain law may appear to be all that it should be from one point of view. But the law should be fair and equitable to all concerned. Like a marble statue it should appear right when viewed from any side.

The nurserymen of the country, more especially in the West, are urging that greater attention be given by the Association and its Vice-Presidents against the enactment of unreasonable and oftentimes unconstitutional laws. Many nurserymen have suffered loss—unreasonable and unnecessary loss. Constitutional rights have been run over rough shod, civil rights trampled upon, interstate commerce interfered with. But the dawn of tomorrow brings us a ray of hope. The publicity bureau of the great corporate interests in commending the recent decisions of the Supreme Court tell us "the light of reason" is at hand, and may be so; because in the far West—Montana—recent legislation gives the nurseryman the right to appeal where formerly his stock was confiscated.

Here the nurserymen of Montana have been successful in having some of their laws revised, laws which, though designed with the best of intentions, really hindered the very interests they sought to help. And so in the future the entomologist, nurserymen, our legislative bodies and all others directly or indirectly interested in this work, should co-operate. The interests of all are identical and lines of procedure should parallel each other.

MUTUAL INTEREST OF ORCHARDIST AND NURSERYMAN

The fault of the present trouble is partially of our own making for we have not kept closely in touch with this part of our work.

Very often, in fact the majority of nurserymen are also orchardists. A great deal of their capital is invested in orchards directly, and indirectly their entire capital; for their success in business is dependent upon the success of the orchardist. The nurseryman should not only be among the first to protect the orchards but should also consider it a part of his duty to co-operate with experiment stations, universities and schools, in the dissemination of information.

EXPERIMENTAL AND DEMONSTRATION ORCHARDS

Some of the most valuable work along this line has been done by nurserymen, but as a body we have been prone to devote all our energy to propagation and selling. The states and the national government are all doing work of this kind, but not enough. There is a crying need for more experimental and demonstrative orchard work. Along experimental lines New York has accomplished good of inestimable value because she has appropriated money generously. Some of the results are shown in those incomparable books "Apples of New York," "Grapes of New York," "Plums of New York," and others which are to follow. All of the states are awakening to their duty. Missouri was one of the first states to establish a strictly fruit experiment station. However, an unfortunate selection was made as to location, in which our faithful scientific men have been handicapped. To do justice to all the vast state, there perhaps should have been several stations.

Our station at Columbia, Missouri, after working for years in an unfavorable location, have gone to the great orchard lands and purchased a large orchard farm, where extensive plantings have been made, not merely experimental but on a commercial scale. And under such able direction as that of Dr. Whitten, Dr. Howard and Prof. Chandler there will be accomplished for Missouri results of far-reaching value, if measured only from the dollar point of view. Such are some of the results of the influence and work accomplished by the Missouri State Board of Horticulture.

The work of Dean Bailey and of Professor Craig of Cornell, with whom we are all well acquainted, illustrates what can be accomplished by individual effort. It has been said that one great whole-souled person in each community would revolutionize the world.

Nurserymen should encourage and promote all such work. Be generous with your products and since such institutions are generally cramped for funds, don't hesitate to supply the material for experimental

work without money or price. You reap the benefit along with your customers and all for the general public good. The nurserymen have a special opportunity for they come in touch with the fruit grower at planting time, just when he is forming his plans for the orchard. It lies in the power of the nurserymen more than with any other person to help him start right, to help him avoid mistakes. We have been neglecting this field—it is a duty as well as an opportunity, for it leads to larger and better markets.

CIVIC IMPROVEMENT

This is another important lead which has received little attention from nurserymen as a whole. As the country is developed the people have more time for beautifying their surroundings. Instead of encouraging and helping and teaching, we are waiting for them to come to us.

FORESTRY

Forestry is still another opportunity. The nurserymen belong in foremost rank whether they are propagators of forest tree seedlings or not. When we take upon ourselves the work of furnishing the people with trees we assume certain responsibilities, not only to the people but to each other.

TIME OF MEETING

It often happens that conditions are not as satisfactory as they might be and yet one is at a loss to offer a solution. The following is made as a suggestion with the thought that it may lead to profitable discussion. June is not an ideal month for the Convention. The spring business is scarcely closed, the growing crops an unknown quantity, therefore, would it not be well to consider the advisability of changing? How about semi-annual sessions, September and January? In September the growth is made, buyers and sellers may do business intelligently. In January, the fall business is out of the way, an opportune time for preparing for the spring trade. Commercially at least September and January should be the ideal months.

MEMBERSHIP AND FEE

Two things are needed, more members and an increased membership fee.

This Association needs and should have the membership of every reliable nurseryman (I lay special emphasis on the word "reliable") in the country. The more nearly our roll of members embraces the individual and incorporated nurserymen of the country, the greater will be the good accomplished. But in strengthening our membership we should not allow quantity in numbers to blind us to quality, that is, we



Showing Crown Gall on Test Trees Planted for Observation
by Hoopes Bro. & Thomas

want only those nurserymen who because of their skill and knowledge of the craft, reflect credit on the industry as a whole.

I want to put this question to the Convention: are we charging our members a fair price for the protection, the standing and other benefits accruing because of such membership? I am sure we are not and before the adjournment of this meeting is called, I should like to see a resolution adopted which will increase the fee to a figure more nearly representing the worth of the services.

What should the figure be? Ultimately a membership in the American Association of Nurserymen should be worth not less than \$25.00 per annum; to raise it to that figure from the present \$5.00 would, I realize, be too long a jump. \$15.00 then seems to me to be fair; \$10.00 should be the minimum.

It may be argued by some that to increase our fee will be working a hardship on the little fellow. This argument I propose to anticipate by pointing to the fact that of all our members who are most benefitted because of their membership, the little fellow heads the list. One of the greatest problems faced by the smaller nurseryman or the new nurseryman is that of establishing his standing with the world at large. How can he gain standing as economically and so quickly as to be able to show that he has been recognized by the American Association of Nurserymen?

PUBLICITY

The industry of growing nursery stock is one of the oldest of our American industries; likewise it is an honored one, in which to be engaged, no man need blush. And it is an industry which has added untold wealth and beauty to our country and brought happiness to thousands. Yet there exist possibilities of development, of which you all are aware, but which have been allowed to go untouched and unworked.

If the customer lists of each firm or individual member of this Association were brought together, collated by states and these checked against the total number of possible buyers in each state, there would be revealed, I doubt not, an astonishingly low percentage. The majority of the names in these lists would represent, I am sure, buyers of our product who have made their purchases, not because we have educated them to the necessity or the value of our wares, but because the individual had educated himself. It must be apparent, even to those of us who have given but little thought to this big subject, that the maximum development in our industry must come from a united publicity effort—from a campaign of education; we, as an organization, must teach our country's population that our products are good products, that they bring not only wealth but beauty and happiness as well. Have not all of you had dealings with the type of man who had not planted the products of the nurserymen simply because he did not know, or have the imagination to see, what they would do for him in a few years' time?

This country of ours is bigger than most of us appreciate; it is peopled with a hundred millions of humans of whom forty millions are possible buyers of our products. Publicity then, to this Association, means the carrying of our message to these forty millions of people. This can not be done in a day nor in a year; but it can be accomplished.

Publicity of the kind about which I have just spoken, can not be thought of without linking with it the idea of unified effort. I doubt

that there is a single member of the Association who will question the necessity or the wisdom of conducting a vigorous campaign of publicity, but such a campaign will be a failure unless we work and pull together—unless each member is willing to do his full share both of work and of subscribing his portion of the money necessary to carry it on.

There are many kinds of advertising. There is but one kind for the nurserymen, as an Association, to consider—associated advertising which will educate. Once we have educated home owners and land holders to the necessity of planting trees and vines and shrubs, they will become ready buyers—orders will take care of themselves. We must preach and teach the gospel of nature, of her beauties, her health and her wealth. Then we must link the nurseryman with nature, showing how closely he works with her, how by his skill and his untiring effort, he is producing that which will help nature shine at her best, both in beauty and productivity of fruit wealth. But again I repeat, such a campaign is one calling for associated effort.

"Fruit and its food value" alone offers unlimited opportunities for a campaign of education, especially since the importance of more fruit and less meat in the modern dietary is made a subject of frequent reference in our country's periodicals and by our foremost physicians.

It is that we are paying too little attention to working on the imaginations of our customers and prospective buyers—we are prone to limit our advertising to the same old story "unlimited stock of extra fine apple, cherry, peach, plum, grape, small fruits, ornamentals, etc. Send for prices." Why should we not make capital and pay dividends by working to its last limit the thought of the greater beauty, the health, the happiness, the contentment and the money profits to be gained by the liberal use of the products we are growing? Think about it, men, it is worth all the thought and concentration you can give it.

Sooner or later the march of progress will

force the nurserymen's present day feeling of antipathy to get out of the rut of silence into an appreciation of the necessity and the economic wisdom of conducting a vigorous campaign of educational advertising.

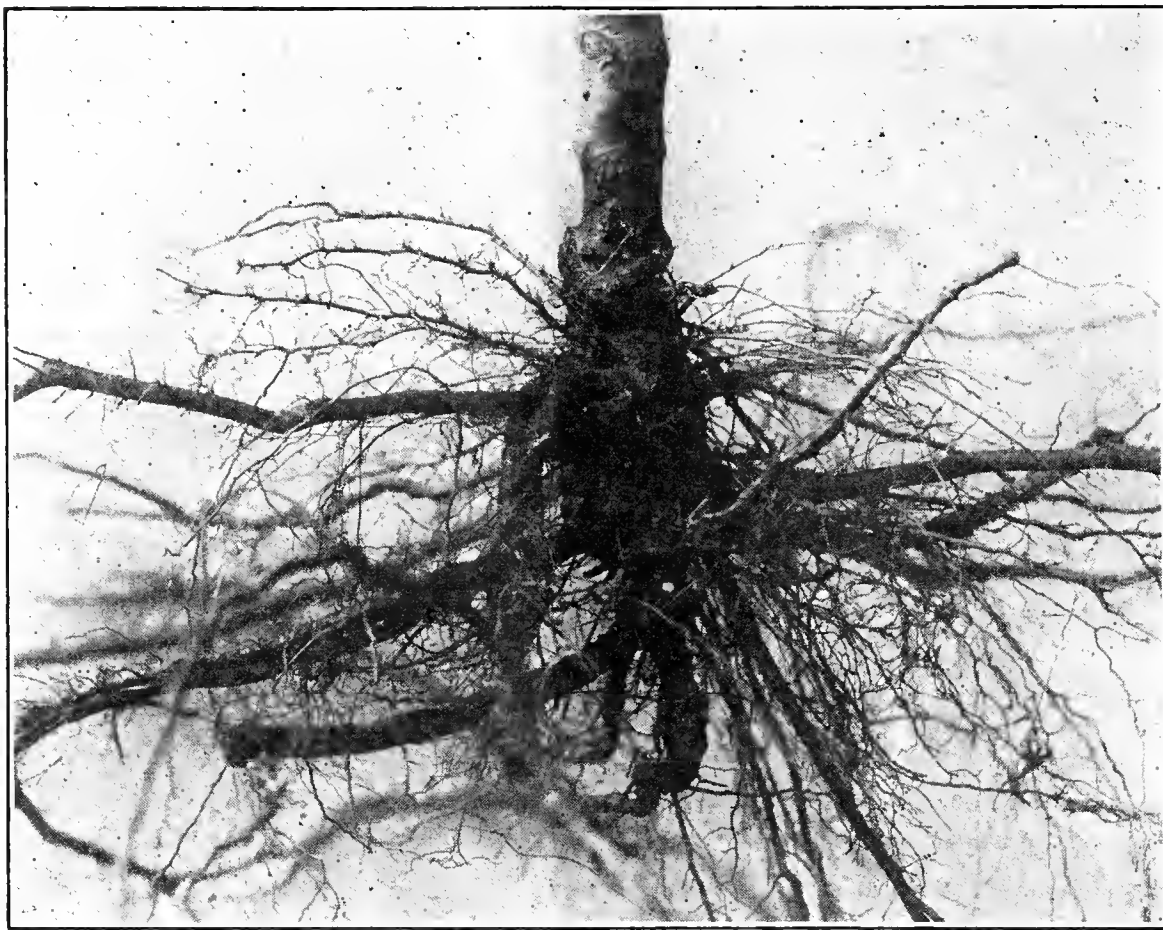
Why should we not accept the inevitable today—now—at this meeting, by appointing a carefully chosen, capable, energetic committee to work out for us a practical, common-sense plan for taking advantage of the wonderful opportunities on which we are now peacefully sleeping? I should feel that my term as your president had been successful beyond my expectations did you but act on this suggestion. And when such a committee had made its investigations, submitted its report and a real campaign had been put under headway, I feel an absolute confidence as to the degree of new business life which would be injected into our industry.

Remember that we are living in the 20th century; 20th century methods must be used by the nurserymen to meet 20th century conditions; 19th century methods will no longer suffice.

[Remainder next month.]

INCORPORATED

Alvin, Texas. Stockwell Nursery Co., capital stock, \$100,000. Incorporators, E. S. Stockwell, W. A. Stockwell, H. Gammill and others.—*Horticulture*.



Showing Crown Gall on Test Trees Planted for Observation by Hoopes Bro. & Thomas

REPORT OF JOHN HALL, SECRETARY

Gentlemen: In rendering a report of my stewardship for the past year I make note of the fact that, in accordance with instructions of the Association at its last meeting, a card, containing the recommendations of a Special Committee of which Mr. J. H. Dayton was chairman, was prepared and a copy mailed to each member of the Association. The recommendations or suggestions referred to treated upon the importance of establishing certain rules relating to the maintenance of prices, etc. Doubtless members heeded the injunction of Mr. J. W. Hill to "post them on your desk as a reminder that you voted for their adoption."

In further compliance with instructions of last year's meeting, a "separate," containing the papers read at that meeting with reference to Crown Gall, was also published. These papers bore the following titles, viz.: "Effect of Crown Gall upon the Orchard," by Mr. Peter Youngers, Geneva, Neb.; and "Root Gall," by Mr. E. A. Smith, Lake City, Minn. The edition of a thousand copies, was proportionately divided for distribution by the committee, and the Secretary retained a few copies to mail to those who applied to him for them. Of these there was quite a number.

It is always to be regretted that in large organizations of such practical value as this there are annually recurring fluctuations in the membership. Over forty of those whose names were on last year's list failed to renew the current year. Each one of these delinquents has received from the Secretary at least two, and, in some cases, more reminders of the importance of renewing. But there is another and a brighter side to the situation. The Secretary early began to surmise that there would be a shrinkage, and being somewhat of an optimist he is not easily discouraged. Heeding the declaration of Bulwer-Lytton's Richelieu that "there is no such thing as fail," I at once entered upon a vigorous and fairly widespread campaign for *new* material. This has resulted in our not only making up the loss referred to but of bringing the enrollment for the year to a point over thirty in excess of last year's registration.

If members have not already made an analysis of the membership with reference to representation by localities we commend such a study as affording considerable food for thought as well as interest. As an illustration I will mention the States having a representation of six or more, viz.:

Colorado, 6; Connecticut, 6; Illinois, 25; Indiana, 15; Iowa, 12; Kansas, 22; Michigan, 20; Missouri, 18; Nebraska, 10; New Jersey, 8; New York, 78; Ohio, 28; Oregon, 6; Oklahoma, 6; Pennsylvania, 13; Tennessee, 13; Texas, 9.

I trust that this reference may awaken a new interest among members, even to the creating of a friendly rivalry to see which State can next year make the largest addition to its representation.

If members will co-operate with the Secretary there is no reason why every nurseryman who *ought* to belong to the organization cannot be induced to join its ranks, and we now invite members to suggest the names of individual nurserymen and of firms with whom correspondence may be opened.

In our desire to reduce expenses we have this year invited bids for the printing of the Badge Book and of the Annual Report. There was a difference in figures between the lowest and the next highest of \$50, and a difference between the lowest and the highest of \$146. We believe the appearance of the present issue of the *Badge Book* justifies the experiment.

DECEASED

Prosper J. Berckmans passed away on Nov. 8, 1910, in his 81st year. He was long identified with this Association, and those who knew him best will heartily endorse the comment of the *Florists' Exchange*, viz.: "Mr. Berckmans was endowed with a graceful, commanding figure, and a charming personality. His death will be generally regretted in horticultural circles."

In the removal of Samuel C. Moon this organization has lost another valued associate. Mr. Moon died in January last, in the 57th year of his age. THE NATIONAL NURSERYMAN thus referred to him: "A refined, cultured gentleman, a true plant lover, his loss to nursery-growing intersets is heavy."

James M. Kennedy died Sept. 6, at Dansville, N. Y., aged 49. Though not a member with us at the time of his death, Mr. Kennedy formerly held membership in this Association.

It seems not unfitting that we should mention the fact of the death of several others who had died during the year, and who, though not officially identified with this Association, nevertheless claim passing recognition because of their prominence in the horticultural world:

Robert Buist, the well-known seedsman of Philadelphia, died Dec. 15, 1910, in his 73d year. The father of Mr. Buist came to this country from Scotland, and was reputed to be the first florist and nurseryman in the Quaker City. Mr. Thomas Meehan, writing of Mr. Buist's death, says: "Horticulture does not yet know the full value of the friend it has lost."

J. H. Reynolds, the oldest nurseryman in the State of Michigan, and pioneer of Monroe, died July 21, 1910, in that town, at the age of 91 years.

Mr. Thomas C. Wilson, of Brighton, N. Y., was killed on the tracks of the New York Central Railroad almost within sight of the home in which he lived. He came to Brighton 78 years ago, when he was but five years old. Mr. Wilson was one of the first to engage in the nursery business in that section.

Nor can we refrain from mentioning the death of Jean Soupert, a well-known rosarian, who died July 16, 1910, at the age of 76 years. The names of Jean Soupert, and that of his brother-in-law and partner, Pierre Notting, who died in 1895, will long remain fragrant as the beautiful roses which bear their respective names.

Perhaps one of the saddest of sad events of the year was associated with the death of Mr. F. Haussman, one of the largest nurserymen in Los Angeles, Cal., which occurred March 9 last, at the age of 56 years. He left a widow, one son and one daughter. Fourteen days after the death of Mr. Haussman, the son, described as a quiet, industrious boy, only 20 years old, was so grieved at the death of his father, that he crept under the propagating bench in the greenhouse and shot himself in the head.

SECRETARY'S FINANCIAL STATEMENT

Dec. 14, 1910, to June 3, 1911

1910	
Dec. 14,	Balance after closing last year's account as read at the annual meeting \$ 233. 65
1911	
June 3,	From Memberships 1850.00
	" Advt's 662.00
	" Extra Badges 25.50
	" Sales of Codes30
	<hr/> \$2771.85
1910	
Dec. 14,	Cash to C. L. Yates, Treas \$233.65
1911	
June 3,	Cash to C. L. Yates, Treas 2500.00
	" in Union Trust Bank 38.20
	<hr/> \$2771.85

NOTE—This amount will be increased by several bills yet unpaid, and by new memberships received since June 3.

TREASURER'S REPORT, 1911

Your Treasurer submits his annual report from June 4th, 1910, to June 14th, 1911:

RECEIPTS

1910			
June 4,	Cash on hand		\$4153. 60
Dec. 19,	John Hall	\$233.65	
31,	Interest	110.84	
1911			
June 3,	John Hall	2500.00	2844.49
			<hr/>
			\$ 6998.09

DISBURSEMENTS

June 24,	Union & Advertiser, Badge Books	\$340.25
	John Hall, Postage, Telegrams, etc.	8.49
	E. P. Bernardin, Postage, Printing, etc	20.00
	John Hall, Salary as Secretary	500.00
	C. L. Yates, Salary as Treasurer, and Postage....	50.70
June 16,	Whitehead & Hoag Co., Badges	22.50
	A. M. Ferguson for Smith Photo Co	10.00
June 25,	John Craig, Expense to Denver	105.00
	Miss Jacobson, Expense to Denver	103.00
Sept. 24,	W. W. Morrison, printing French circulars	10.00
Oct. 4,	John Hall, Express, Postage, Telegrams	2. 35
	Union & Advertiser, 1000 extracts	22.40
	Christy Engraving Co., half tone	3.75
Oct. 10,	Union & Advertiser, printing report	341.55
1911		
Jan. 7,	John Hall, Stamps and Envelopes	26.24
	M. Wolfe Co., Bond for Treasurer	18.75
May 5,	John Hall, 1 M 2c Envelopes	21.24
	The Du Bois Press, Printing	13.25
	United Litho. & Printing Co., 1200 Circulars	5.85
	Davis & Steel Co., 1000 receipt blanks	5.00
		<hr/>
		\$1630.32
June 6,	Cash in Bank to Balance	5367.77
		<hr/>
		\$6998.09

All of which is respectfully submitted.

C. L. YATES, *Treasurer.*

FINAL RESOLUTIONS

We shall always regard this, the 36th annual meeting of this Association as one of the most pleasant and profitable in the history of the organization.

We feel especially indebted to the Entertainment Committee, Messrs. Weber, Schuette, Irish, and their efficient corps of lady assistants for the delightful entertainment furnished the members of the association and the visiting ladies during our stay in this city.

We shall recall, in after years, the enjoyable trip down the Mississippi, on the steamer Alton, as one of exceptional delight and pleasure.

We take this occasion to express to Mr. Weber and the other members of his Committee our sincere gratitude for the many courtesies extended and the pleasant recreation afforded us during this session.

Nor must we fail to include in these resolutions the almost inexpressible pleasure afforded us by Dr. Trelease and the staff of the Missouri Botanical Gardens, by their invitation to the members to visit this unrivaled institution of which they are the custodians and guardians. Surely it was a veritable "land of pure delight" and the donor doubtless has looked

down on us in spirit from the land where the "fields stand dressed in living green and never withering flowers abide!"

Coupled with this we make mention of the charming banquet at which we were made the special guests—an occasion that was, indeed, a "feast of reason and a flow of soul" to each of the participants.

J. W. HILL,
W. F. HEIKES,
C. C. MAYHEW.

EXCURSION TO STARK BROTHERS' NURSERIES AND
[ORCHARDS OFFICE AT LOUISIANA

One of the enjoyable and unscheduled features of the entertainment side of the program was an excursion on Saturday morning by some sixty-five members of the Association to Louisiana, the headquarters of the Stark Brothers' Nurseries & Orchards Company. President Stark, at one of the previous sessions, gave a general invitation to the Association to visit their headquarters. He not only opened wide the hospitable doors of his organization, but he provided means of transportation from St. Louis to Louisiana. This was not only inviting your guest, but taking him along without expense.

The excursion was exceedingly instructive and greatly appreciated by all persons who attended. Reports were rife that the organization of the offices and office force as seen at the Stark Brothers' headquarters appeared to be the most efficient and complete seen anywhere in the country. The members who were able to avail themselves of the invitation have spoken in highest terms of the entertainment and the hospitality provided. It was thoroughly Missourian in style, which in itself is a guarantee of high quality.

Thomas B. Meehan and J. H. Dayton plan to explore the lower Mississippi by steamer. Their route was outlined to New Orleans. Therefrom the destination was not indicated. Several groups after visiting Louisiana and enjoying the hospitality of the Starks went west to Shenandoah, Iowa, where they visited the Lake and Welch establishments, while some of them planned scouting the Topeka and Kansas seedling apple regions.

NATIONAL NURSERYMAN:

Enclosed please find check for \$1.00 for which send me the NATIONAL NURSERYMAN another year. Can't do without it.
Wisconsin. EVERGREEN NUR. Co.

NATIONAL NURSERYMAN:

Enclosed find check for \$1.00 for one year's subscription. The trade needs just such a journal. I must have it.

California.

T. A. BUTTERWORTH.

William F. Kasting, of Buffalo, is a candidate for the office of commissioner of agriculture for the state of New York to succeed Raymond A. Pearson, whose term of office has expired.

John C. Chase, of Benj. Chase Co., Derry, N. H., is making a Pacific coast trip after the St. Louis convention.

HISTORY OF ATTEMPTED FEDERAL LEGISLATION PROVIDING FOR INSPECTION OF FOREIGN NURSERY STOCK

Report of Committee on Legislation

Wm. Pitkin, Chairman

Members of the American Association of Nurserymen:

Gentlemen:—As Chairman of the Legislative Committee having charge of legislative matters east of Mississippi river, I beg to submit the following report:

FOREIGN NURSERY STOCK

The most important matter which has come to the attention of this Committee since the last convention is the proposed legislation affecting the importation of foreign nursery stock, as covered by bills known as the Simmons bills; and as there has been a considerable amount of agitation on this subject in the trade papers and other publications during the past few months, it seems advisable to place before you a brief history of the matter, so you may all be informed, and be in position to consider and to vote on certain resolutions which will be offered later.

As you all know, there has been for a number of years considerable discussion on the question of federal regulation and inspection of nursery stock in interstate commerce. Many of us have felt that if a federal law could be enacted that would do away with the various and annoying state laws, that it would be of great advantage to the nursery trade, but legal advice has shown us that while Congress might enact satisfactory and efficient legislation, it could only apply to the movement of nursery stock in interstate commerce; and that after a shipment of nursery stock reached its final destination within the state, it would still be possible for a state under its police powers, to step in and inspect, fumigate, or otherwise dispose of the stock so that it has not seemed that a federal law would accomplish what it was hoped it might.

Up to the winter of 1909, there had been no special discussion or agitation on the question of importations of foreign nursery stock, except to a slight degree in connection with the question of interstate commerce.

APPEARANCE OF BROWN TAIL MOTH AND INSPECTION BILLS

During the winter of 1909, Brown Tail Moth were found on fruit tree seedlings imported from France. During that winter a bill was introduced in the House of Representatives, aiming to regulate, inspect, and control importations of foreign nursery stock.

That bill provided in substance, that all shipments of foreign nursery stock were to be unpacked, inspected, and re-packed at the port of entry, and as the larger portion of nursery stock enters the port of New York, it meant that a very large quantity of seedlings were to be handled on the wharves of New York, inspected, and re-packed and shipped on to destination, and all this to be done during the severe cold weather.

That bill passed the House of Representatives, was reported favorably by the Senate Committee, and was on the Senate calendar for action before your Legislative Committee had any information of the matter.

We succeeded however, in preventing its passage in the Senate during that session, and at the suggestion of the Chairman of the House Committee on Agriculture, your Committee agreed with Dr. Howard to meet with him before the following session of Congress, and endeavor to agree on a form of bill which would be efficacious and practical.

Your Committee used its best efforts to secure such a conference with Dr. Howard during the summer and fall of 1909, and was unsuccessful. We had some discussion by correspondence, but were unable to agree on some points, and soon after Congress convened, Mr. Simmons again introduced a bill on the same subject, but somewhat modified from the original bill.

The second bill provided that the nurseryman must first make an application to the Secretary of Agriculture for a permit to import nursery stock, that all foreign nursery stock must be inspected on the premises of the consignee, that the Secretary of Agriculture should have authority to quarantine against any country or district in which in his opinion the conditions were such as to make it dangerous to import nursery stock, therefrom.

In April, 1910, your Committee appeared before the Committee of Agriculture of the House of Representatives, and presented its views, meeting at that time Dr. Howard and his friends, who were equally strenuous in presenting their arguments. Both sides were given a hearing, and later the Committee endorsed the Simmons Bill and reported it favorably to the House, but the House failed to take any action on it during that session.

During the session of 1910-1911, the bill was again introduced in the House, and came up for passage during the last days of February, and failed to secure sufficient votes in its favor.

A new bill was introduced by Mr. Simmons during the present extra session, and your Committee is informed that no action will be taken on it during the extra session, but it is expected that it will come up for consideration during the regular session beginning December 1st, next, and your Legislative Committee should have instructions as to the course which you desire it to take in reference to the new bill, and particularly as to the general attitude of this association on this subject, and certain resolutions will be introduced later in the session for your consideration and action.

DRASTIC QUARANTINE PROVISIONS

The present bill was introduced May 4th, 1911, and is numbered H R 8611. It provides in substance that it shall be unlawful to offer for entry any foreign nursery stock unless and until a permit shall have been issued therefor by the Secretary of Agriculture under such conditions and regulations as he may prescribe, and unless such nursery stock shall be accompanied by a satisfactory foreign certificate. That it shall be the duty of the Secretary of the Treasury to notify the Secretary of Agriculture of the arrival of any nursery stock at port of entry that the importer of such stock shall immediately upon entry, advise the Secretary of Agriculture or his agent of the name and address of the consignee, the quantity of stock it is proposed to ship, the district and country where grown.

It further provides that no person shall offer for entry any nursery stock unless the package is marked to show the nature of the contents, country where grown, name and address of shipper and consignee.

Further that all shipments of nursery stock in interstate commerce shall be plainly marked to show nature of contents, name and address of consignee, and country or district where grown.

It further provides that the Secretary of Agriculture shall have authority to forbid the importation of any nursery stock, fruits, vegetables, bulbs, plants, and seeds, from any country which he deems dangerous.

It further provides that the Secretary of Agriculture may have authority to quarantine any state or territory or any portion thereof, when in his judgment any dangerous plant diseases, or insect infestation exists in such state, territory, or portion, and while such quarantine is in force no nursery stock may be shipped from such section.

There seems to have been a decided change in the position of Dr. Howard. At first he contended that the one all-important point was the inspection by the federal government. He regarded foreign certificates of no value. He said that in many of the states the provisions for inspection were inadequate, and consequently he must have authority to inspect every importation of foreign stock.

This bill does not seem to provide for any inspection of foreign nursery stock, but simply aims to provide means so that the Secretary of Agriculture may have information as to shipments of foreign nursery stock entering the country, and their destinations. What is proposed to be done with the information, is not stated, but it would seem that without legislation, such information is now available through the Treasury Department, and as no inspection is provided for, we must still rely, as we do now, on the inspection of our various states, so that your Committee fails to see any advantage in that part of the proposed bill.

It is proposed to place certain burdens on us in the way of permits before we can import. It provides that no shipment can be offered for entry unless it is accompanied by a foreign certificate of inspection, and as a matter of fact, it has been conceded by Dr. Howard and his party that foreign certificates have no practical value, yet under this bill we can't make an entry of nursery stock if it so happens that a worthless foreign certificate has been left off. It gives the Secretary discretion as to whether he shall issue a permit or not, or in other words, gives him absolute power over the importation of foreign nursery stock.

The section providing authority for the Secretary to quarantine against any foreign country or district, gives him absolute authority to say whether or not you may import foreign seedlings or other nursery stock, and the worst part of this proposition is that as you all know, your contracts for French seedlings are usually made six months or more in advance of shipment. Some of our members make their contracts at the time the seed is purchased, fully eighteen months in advance of shipment.

Under this bill it would be entirely possible for the Secretary of Agriculture during December of any year to issue an order of quarantine against some particular district in France; let us say Angers for example, and if such a quarantine order were issued, any stock for which you had contracted in Angers six months or eighteen months previous, could not be shipped to you, and you all know that at that date it would be absolutely impossible for you to purchase at other places most of the stock that you would require, consequently you would have none of that material for your subsequent Spring planting. Your rotation of crops would be interfered with, and not only yours, but many other nurserymen, and that is where the interests of the fruit growers and orchard men will be affected, for when a year came around during which that planting would naturally come into market, there would be a shortage of trees, and prices would go to the limit.

It is not believed by your Committee that there is any necessity for such radical legislation. We have had experience with the Brown Tail Moth question during the past three years, and it has been entirely possible to control it, and we see no reason why authority should be given for an absolute quarantine of nursery stock.

No special argument is needed to show you the danger of the provision for a quarantine against any certain state or portion thereof. The section speaks for itself, and we can all imagine what might happen if such authority were lodged in the hands of any one official. On the recommendation of some inspector, Dr. Howard might decide that Monroe County, New York, or Lake County, Ohio, were danger spots. draw a circle around those counties, and while that quarantine was in force, not a tree or a plant could be shipped out of those counties; eer-

tainly too much arbitrary power to be placed in the hands of any one man, and with no chance for appeal from his decision.

It seems desirable to give you a little further information as to the course that has been followed by your Committee and by Dr. Howard, and his friends, for the reason that it is evident that there has been started a campaign of newspaper publicity on this subject, with the idea of stirring up agitation and arousing a sentiment in favor of the Simmons Bill, and when in these remarks Dr. Howard is spoken of, it is to be considered as referring to Dr. Howard and his assistants, who are working together on this matter, and evidently in concert.

During last winter we received letters threatening that if we did not cease our opposition to the bill then in Congress, that they would start on a campaign of newspaper publicity, and show us up, and we told them to go ahead, and that we would be very glad to be shown up in connection with this matter. They have implied bad faith on our part, but as far as that is concerned, your Committee feels that it has not been treated fairly, and is fully justified in any steps that it may have taken.

NURSERY INTERESTS NOT CONSULTED

For several years there had been a tacit understanding as admitted by Dr. Howard, that there would be no legislation of this character without consultation.

Contrary to this understanding, Dr. Howard and four friends got together quietly in the winter of 1909, formulated a bill, got it through the House, and almost through the Senate, before the nurserymen knew anything about it.

That bill provided for inspection on the dock at New York, an utterly foolish proposition, and so admitted later by Dr. Howard, and yet in some of the articles that they are publishing, they attack us for killing that bill.

At that time, Dr. Howard agreed to meet us in conference, and endeavor to formulate a bill that would be satisfactory all around. We tried our best, both by letter and personal call, to secure a conference with Dr. Howard during the summer and fall of 1909, and were unable to do so. We had some correspondence with him, but were unable to reach an agreement, and as you all know, there are lots of matters that cannot be arranged by correspondence, but can be harmonized in a conference.

In January, 1910, Mr. Rouse and your Chairman were invited to attend the convention of the Horticultural Inspectors at Boston, to discuss federal legislation.

We took to that conference a bill sometimes known as the Nurserymen's Bill, which had been drawn up by us at the suggestion of Dr. Howard, and not because we had any legislation to propose, but simply to get our ideas on paper, so that they might be discussed with him. At the Boston meeting the Nurserymen's Bill was carefully considered, discussed, and that meeting voted to adopt the bill, and instructed its Legislative Committee to support it, with one or two slight amendments.

Notwithstanding that action, the Legislative Committee of that organization appeared at a hearing at Washington in April following, and supported Dr. Howard's position, and opposed the position of the nurserymen.

ACTION WITHOUT AUTHORITY

During the winter of 1909, Dr. Howard issued an order to the steamship lines running into New York, and the railroad lines running out of New York, to the effect that they were not to handle any nursery stock on account of the suspicion of Brown Tail Moth, and cited as his authority a certain law passed in 1905, and called their attention to a penalty of \$5,000 for a violation of that law. The railroads were afraid of Washington anyway, and did not know what was going to happen to them, and shipments of nursery stock were held up in New York during the winter for a week or ten days.

Under the law of 1905, quoted by Dr. Howard, he had not a shadow of authority for his action, and afterwards in Washington admitted that he had no authority, and said he was only bluffing.

Is a man who will do as Dr. Howard then did, without any authority whatever, a safe man to intrust with the absolute control of the nursery business of the country, and with no opportunity provided for an appeal from his decision?

Dr. Howard has stated that the opposition to his bill comes only from a handful of New York state nurserymen, who are importers, and that the bill is favored by the large number of nurserymen of the country. That statement is made in print, and he says further that his bill has been approved by the NATIONAL NURSERYMAN, the trade paper of the Nurserymen's Association, and that certain letters received by Mr. Orlando Harrison in 1908 from several hundred nurserymen also favored this legislation.

Mr. Harrison tells me that the letters of inquiry sent out by him at that time bore more particularly on the question of a federal law covering interstate commerce, and did not have particular reference to foreign importations.

Prof. Craig, editor of the NATIONAL NURSERYMAN, tells me that any editorials of his appearing in that paper have been simply on the line of an approval of any efforts to shut out diseased foreign nursery stock, and that THE NATIONAL NURSERYMAN has not endorsed the Simmons Bill or any other particular bill.

As to the statement that the opposition comes from a small number of importing nurserymen, that the main body of the nurserymen are not interested in the matter, and do not import nursery stock, I am told by six agents of foreign houses that during the last winter they had in this country 650 customers who bought French nursery stock, and 889 customers who bought Holland nursery stock. A very large majority of these customers were direct importers of foreign nursery stock, the goods being billed to them, and entries made in their name.

The statement has also been made by Dr. Howard, that the amount involved in this matter was very small, only about \$300,000, and that it was ridiculous to endanger the country for the sake of a little business amounting to \$300,000 a year, and that it would be cheaper for the Government to buy up the nurserymen for that price, rather than to admit foreign-nursery stock.

AMERICAN IMPORTS LARGE

The amount involved does not affect the justice of the proposition, but nevertheless Custom House records show that the entries at New York City alone for the year ending June 1st, 1910, were \$970,000, and it is a conservative estimate that the value of all of the articles covered by the Simmons Bill will run not less than \$2,000,000 per year. Remember, this is foreign valuation, to which should be added fifty or sixty per cent. to arrive at the value in this country. This shows the value of Dr. Howard's estimates, and places a doubt on some of his other statements.

Your Committee has been attacked by Dr. Howard for its course in this matter, and the statement has been made that while we expressed ourselves as favorable to inspection, that we had, by defeating proposed legislation, shown that we were opposed to any and all legislation on this subject.

LACK OF CONFIDENCE IN BUREAU OFFICIALS

Your Committee did state in Washington that it was not opposed to the principle of inspection, if done on safe, sane, and practical lines, but we have felt that the bills proposed placed very large discretionary powers in the hands of the Secretary of Agriculture, and that means Dr. Howard or somebody under him, and we can say frankly that we are opposed to any bill that will place discretionary powers in his hands, for from what we have seen of his acts during the past three years, we do not feel that it would be safe for the nursery interests of this country to place itself unreservedly under his control. His action in 1909, in attempting to secure legislation without consulting the nurserymen, and legislation that he afterwards acknowledged was impractical, and further his promise to consult with us in relation to a bill, which promise he did not keep, his action in ordering railroads running out of New York to refuse to handle nursery stock, and this action taken without authority, as afterwards admitted by him, the action of his friends in adopting the Nurserymen's Bill, and then later on opposing it, and supporting Dr. Howard, all show your Committee that in its opinion, Dr. Howard is not a safe man in whose hands to place such large discretionary powers, and in our opinion any legislation backed by Dr. Howard should be opposed by this association.

While it is true that Dr. Howard at one time offered to eliminate the foreign quarantine provision if your Committee would consent to the

passage of the balance of the bill, we did not feel that it was safe to permit any legislation of this character, believing that if an apparently harmless bill were enacted, it would be followed later by amendments, which would place us in the condition that we have been striving hard to escape from.

We all remember the agitation twelve or fifteen years since in regard to San José Scale. If one-half the trouble then prophesied by the experts had come true, there would not today be standing a nursery, an orchard, or a forest. They talked destruction from one end of the country to the other, and filled every one of us with terror or dread. Today our friend, Hale, of Georgia and Connecticut, and others, tell us the San José Scale has been a blessing, for it has forced the orchard man to take care of his trees.

One substantial and tangible result of that agitation is that it has provided good jobs at the expense of the federal government and the states for a large army of so-called experts, and there is now a long waiting list of applicants for positions in that army which must be taken care of.

One very apparent reason for this present strong agitation is that if this bill becomes a law, the Brown Tail will prove as big a boon for the experts as was the San José Scale.

At the conference at which the original bill was formulated, there were five men present, and two of the five were slated for good positions under the law, if enacted.

When the bill came up in Congress last February, one of the arguments made against the bill by a member of Congress to whom nothing had been said by this Committee, so far as your Chairman is informed, was that the bill if enacted meant the employment of a standing army of thousands of men to inspect these nursery importations, and that instead of involving an appropriation of \$25,000 as stated in the testimony of the Chief of the Bureau of Entomology, the Congressman said that he was willing to stand by the prophecy that if the bill was enacted, the next ten years would see an appropriation amounting up to millions of dollars.

The Congressional Record also contains copy of letter from Secretary of Agriculture Wilson, addressed to Mr. Simmons, and favoring the bill, and this letter was one of the exhibits filed while the bill was under discussion.

The letter was evidently written by Dr. Howard or Mr. Marlatt, for it contains the same statements that have been made by these gentlemen at other times, and repeats the assertion that the only opposition to the bill comes from a small body of importing nurserymen, and that it is favored by the agricultural, horticultural, and forestry interests.

There was also filed at the same time, an exhibit headed "Attitude of large producing and other nurserymen toward the proposed planting inspection law," and we see that three nurserymen wrote letters favoring to some extent Howard's proposition, but these three nurserymen are all heavily engaged in the growing of American Apple Seedlings.

Another letter quoted comes from our friend, Col. Watrous, but the Colonel forgot to state that the Nurserymen's Bill was sent to him as Chairman of the Committee on Legislation of the American Pomological Society, and that after consideration he said that he approved of the bill.

The same exhibit quotes letters supposed to have been received by Mr. Orlando Harrison in 1908, favoring this law, but Mr. Harrison says that that correspondence had mainly to do with the question of federal control in interstate commerce.

The statement has been made in connection with the debate in the House last February, that most of the talking was done by the friends of the nurserymen. We have read over carefully the report of the proceedings, and we find only one member of Congress talking on the subject at all, who had been previously interviewed by your Committee, or had received any information from your Committee, so far as we know.

In the Journal of Economic Entomology, your Committee is also attacked for its course. That article also makes the statement that the opposition comes from a very small body of importing nurserymen, and that the nursery trade generally are not importers, and are in favor of this legislation.

As stated in another place, a few agents of foreign houses report to us that they numbered last season 651 customers for French nursery stock, and 839 customers for Holland grown stock. That does not indicate

that only a handful of nurserymen are importers. We all know that every nurseryman planting fruit tree seedlings depends mainly on France as his source of supply, whether he imports direct or through others, and in this same article they mention the names of the Committee who went to Washington, and as a matter of fact, only one of that Committee, Mr. Rouse, is engaged in the business of importing seedlings and selling them to the American nurserymen. The others as far as we know import for their own use, and their own planting, and do not sell the seedlings again to the trade.

That article accuses your Committee of bad faith, in that it refused to accept the bill last winter after a promise had been made to eliminate the question providing for foreign quarantine. The article forgets to state that the Association of Horticultural Inspectors, made up mainly of entomologists, endorsed the Nurserymen's Bill and the nurserymen's position at their Boston Convention in the winter of 1910, and instructed its Legislative Committee to support the bill, and that in April following that Committee appeared at Washington, opposed the nurserymen, and energetically supported Dr. Howard. The question of bad faith might be brought up in that connection.

NOT OPPOSED TO REASONABLE LEGISLATION

Your Committee has stated that they were not opposed to federal inspection on safe, sane, and practical lines, but that they could not stand for a bill that lodged arbitrary and discretionary powers in the hands of Dr. Howard; and the bill known as the Nurserymen's Bill, and submitted to the House Committee on Agriculture at the request of Chairman Scott, is evidence on that point.

Dr. Howard insists on a law clothing him with absolute and discretionary powers, and your Committee feels that Dr. Howard has handled this matter from the start in such a way that we have lost our confidence in him, and fear that if any bill is accepted by us, and allowed to go through, that it simply means amendments the following year, which can be slipped through and added on to the law, with of course much less effort and much less publicity than is connected with the passage of the original bill.

Your Committee is referred to constantly, as a small handful of importing nurserymen not correctly voicing the sentiment and opinion of this association, and is charged with selfishly checking legislation which it is claimed will be useful to nurserymen, fruit growers, and the public generally.

It is for you so say whether these attacks are well founded, whether your Committee has incorrectly represented your position, or whether you will endorse its work, and instruct your new Committee to go ahead on the same lines.

WM. PITKIN, Chairman,
IRVING ROUSE,
J. M. PITKIN,
J. H. DAYTON,
ABNER HOOPES,
THOS. B. MEEHAN,
Committee on Legislation.

Dated St. Louis, Mo., June 15, 1911.

RESOLUTION ADOPTED BY THE ST. LOUIS CONVENTION OF AMERICAN ASSOCIATION OF NURSERYMEN.

Resolved: That the report of the Chairman of the Legislative Committee be accepted, and that this association heartily and thoroughly approves of the course of its Legislative Committee in connection with federal legislation during the three years, and further resolved that this association confers on its Legislative Committee full power and authority to act for it during the coming year in all matters of federal legislation, with the suggestion that this association favors federal inspection of foreign nursery stock on safe, sane, and practical lines, and that said Committee shall use its strongest efforts to defeat any legislation that will place such absolute, arbitrary, and discretionary powers in the hands of the Secretary

of Agriculture and his Bureau Chiefs as has been proposed by the bills under discussion during the past three years.

Obituary

CHAS. H. MAGOON

Dr. Charles H. Magoon, nurseryman, died at his home in Wakefield, Ia., on June 1, aged 70 years. It is said he started the first nursery in the state, settling in Algona, Ia., in 1857.

PRESTON W. BUTLER

Preston W. Butler, a florist and nurseryman of Penfield, N. Y., died at his home in that town June 14, at the age of 79 years. He was a lifelong resident of Penfield. He was twice married, and, besides his wife, he leaves three daughters, Mrs. John Van Alast, of Fairport, and Misses Sarah and Lerena Butler, of Rochester; two sisters, Mrs. Ellen Holdredge, of Rochester, and Mrs. Celinda Wagner, of Penfield and three brothers, A. Butler and Wilbur Butler, of Penfield, and Benjamin of Fairport.

Business Movements

ALVIN, TEXAS—The Stockwell Nursery Co. incorporated, of Alvin, Texas, have taken over the business of the Gulf Coast Nursery.

ALVIN, TEX.—The following are the new officers of the Texas Nursery Association: W. A. Stockwell, president; R. A. Holbert, vice-president; I. M. Johnson, secretary; Mr. Libby, treasurer. The Association is composed of leading nurseries in the Texas Gulf Coast country, and was organized a year ago in Corpus Christi, but since that time its membership has grown considerably and it is beginning to wield a wide influence.—*Florists Ex.*

John Watson of Jackson & Perkins Co., Newark, N. Y., left June 26th for a two months' stay in Europe, visiting the nurseries in England, Holland, Belgium, Germany and France.

In another column will be found an attractive advertisement of Jeschke Mfg. Co. of Bellevue, Ohio,—offering a new trenching machine which proves successful. Write them for further information, if interested.

Because the women at the Chicago Beach Hotel, where the convention was held last year, referred to the delegates of the American Association of Nurserymen as a "bunch of farmers," Chicago lost next year's convention and Boston was chosen.—*St. Louis Exchange.*

Boston is dee-lighted and we doubt not her ladies will find some more appropriate and flattering cognomen for the nursery visitors. We don't mind snatching something from Chicago once in a while. It keeps things a-moving.—*Horticulture.*

RECOMMENDATION OF COMMITTEE ON EXHIBITS

The committee on exhibits added the following comment to its report: We feel that this feature of our annual meeting should be encouraged, and take this opportunity to express to the exhibitors our appreciation of the excellent showing made at this meeting. We hope that the incoming committee on exhibits will make it a point to stimulate the interest already manifested in this feature, to the end that we may have in Boston next year, if possible, an exhibit which will continue to be the pride of the Association.

THE NURSERYMAN AND THE ENTOMOLOGIST

S. J. Hunter, State Entomologist, University of Kansas.

In the fall of 1896, the Kansas Nurserymen asked the Entomologist of the University of Kansas to assume responsibility for the inspection of Kansas Nurseries. For eleven years without legal requirement these nurserymen, of their own volition, asked for inspection annually. And then they caused the enactment of our present law. So what I have to say might be classed under "Fifteen Years Among Nurserymen." The Nurseryman and his business are not always clearly understood. The individual or organization of individuals who travel about the country buying stock where they may and selling where they can, regardless of consequences, are not Nurserymen. A Nurseryman in the proper sense of the term is a biologist, a student of that invisible stream of life which courses through twig and leaf. To be successful, therefore, he must have a high and proper conception of his vocation and its responsibilities.

In my annual visits among our Kansas Nurserymen I have been not only interested but deeply impressed with the spirit of experimentation manifested in the earnest desire to improve present varieties and to develop new ones. As a result the Nurseryman is now a competent authority on varieties adapted to given regions and the culture such require. In my own state, the first planted orchards were in the main non-productive. Their planters had no opportunity to profit by the experiences of the present day Nurseryman.

It was my good fortune once to be a country school teacher and janitor ex-officio. There is the place to deal with the country life problems. If the teacher places proper emphasis on the marvelous possibilities of the farmer and fruit grower rather than idealizing those vocations which have their centers in cities, then our young people will look more toward rural life for the realization of their ambitions.

And now it may properly be asked, what is an Entomologist? The public frequently associate him with the butterfly net. In reality he has little or nothing to do with the capture of insects, but his time and energy are largely devoted to those fundamental questions which deal with the relation of plants and insects and the development of both. He, too, is a student of biology and as such should be fellow investigator in a common interest with the Nurseryman.

The Nurseryman and the Entomologist are now likewise associated through legal enactment and it is this phase of the subject that doubtless concerns this association most. In this relation it goes without saying that both should be men of integrity. The Entomologist should be a man of good sense and possessed of a reasonable amount of fair judgment. He should be a man to whom you will always want to tell your troubles. If he is not, there is something wrong either with him, or with you. He should keep you advised at all times regarding the nature and condition of your stock and treat your business as strictly confidential.

It has been my uniform experience that Nurserymen want rigid inspection and that they have little patience or respect for things that do not mean what they say. The certificate of inspection is not a commodity to facilitate business but the

outward expression of a standard which every true Nurseryman endeavors to maintain. If this be not so, then it should be evident that each state in its own interest must assume the responsibility for this standard.

I believe that we will all agree that just at this time it is unusually easy to find fault, but constructive criticism is what we want. The Nurseryman and the Entomologist can be of mutual helpfulness. Such, however, can be only through mutual confidence and earnest co-operation.

It goes without saying that we need greater uniformity in state requirements, but there will always be questions which each state must settle for itself. The Nurserymen of each state, therefore, should have a part in determining the policy of its inspection regulations. It should not and can not be properly done independently of them. If present arrangements can not give you a voice you should ask for it. A State Entomologist some time ago asked me what he could do to improve the efficiency of his nursery department. I told him to select from among his nurserymen an advisory committee of representative nurserymen and to counsel with them fully regarding all of his plans of operation.

The Entomologist can be made one of your most valuable assets. You need never question his intentions. His judgment may not always appeal to you. The Entomologist has his problems in the administration of his part of the nursery business. The certificate carries with it his standing. If the certificate is misused it reflects directly upon him. He finds it very difficult at times to classify as a nurseryman an applicant for certificate who has but a few plants on a vacant lot.

Nurserymen are coming to establish fellowships whereby the Entomologists co-operate with them in solving some of the problems which are now costing them thousands of dollars annually. Some Nurserymen are sending their sons to Universities for special training in Entomology. Others are placing an Entomologist on their working staff. This is the proper attitude and one certain of results.

"It is an ill wind that blows nobody good." To petty thieves we owe the discovery of the wonderful fungicidal power of the Bordeaux mixture, first placed on grapes as a protection against pilferers. Injurious insects have proven an incentive to proper culture.

When we consider that more than one-half of our injurious insects are foreigners imported into our country, that foreign imports of nursery stock increase with each year and that with these we are in great danger of introducing enemies of horticulture capable of creating great losses and becoming heavy handicaps to the business represented here, we should be fully awake to the necessity of most hearty co-operation between the Nurserymen and the Entomologists in securing national legislation of the right sort.

This is a time of getting together, the day of co-operation, of government by commission. The Entomologists and the Nurserymen working as a commission, then, are in harmony with the times. In no other way can either obtain so good results.

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Correspondence from all points and articles of interest to nurserymen and horticulturists are cordially solicited.

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American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.

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National Nurserymen's Association of Ohio—President, J. W. McNary, Dayton, O.; secretary, W. B. Cole, Painesville, O.

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Western Association of Nurserymen—President, E. P. Bernardin, Parsons, Kans.; secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets in July and December at Kansas City

THE THEORETICAL EDITOR

The charge is made in the alleged editorial column of a would-be trade contemporary that the editor of THE NATIONAL NURSERYMAN is a theorist, and not a practical man. This is interesting, even amusing. At the outset, we will be obliged to admit that we have been guilty of advocating doctrines twenty or more years ago that were then regarded by some people as theories. For instance, we preached the gospel of orchard tillage as a method of releasing plant food. At that time the cultivated orchard was the exception. Today in the best fruit growing sections the uncultivated orchard is the exception. We advocated spraying to destroy certain plant and insect parasites. At that time the practice did not form a part of the program of one orchardist in a thousand. Today it is almost universal among the progressive fruit growers. We plead guilty to urging the use of legumes as soil regenerators. At that time clover cover crops in orchards were rarely used. Today tillage with cover crops is known to be the best general method of managing the orchard soil. And so it was with drainage recommended to improve the soil's texture, with thinning the fruit to conserve the vigor of the tree and regulate the cropping. Yes, we plead guilty to earnestly advocating all these "theories" in and out of season. Nay, more, our confession is not yet complete; for we have been guilty of practicing them in our own orchards for the past quarter of a century.

This "theorist" thanks his stars that the promulgation of such alleged doctrines has never separated him from the practical issues and it is his greatest pleasure to feel as much at home with the plantsman in the propagating room, as in the nursery row or packing house; for, as a practitioner, he has been through all these departments. And it is also his privilege to have as close an acquaintance with the fruit grower and his practical problems in the orchard, the packing-house, or the market, as with the nurseryman. Such problems have been and are his own.

His business interests in orcharding are such as to place him in intimate contact with financial and economic problems sure to arise from time to time. Such experience gives him a keen realization of the difficulties of the so-called practical men, many of whom are as well supplied with theories—for what man should not use his imagination?—as the recognized teacher.

We present our apologies to our readers for using so much valuable space in a somewhat personal explanation incited by the trivial remarks of a mere paragrapher. This donation of good space simply illustrates the fact that the personal element, even though it may be touched by the uninformed and irresponsible, is the one which invites ready rejoinder.

THE FEDERAL INSPECTION BILL

The report of the chairman of the legislative committee, presented by Mr. William Pitkin, of Rochester, and adopted by the Association, clearly defines the attitude of the Association in relation to federal inspection of imported nursery stock. The nurserymen and their official organ have been grossly misrepresented by a self-styled "independent and fearless" journal which

"stands for the interest of the nurseryman and the fruit grower alike." This sheet made the statement that the nurserymen were "directly opposed to a federal inspection bill," and that THE NATIONAL NURSERYMAN was strongly in favor of the Simmons bill. These statements are not mere inaccuracies, they are falsehoods. The nurserymen, as pointed out by this journal, are not opposed to inspection that is feasible and practicable. The first bill introduced by the United States authorities provided for inspection at the port of entry. THE NATIONAL NURSERYMAN promptly made an examination of conditions at these points, and demonstrated that inspection at the custom-house or docks was entirely out of the question. No mention of this has been made by the "independent and fearless" journal in question.

THE NATIONAL NURSERYMAN has editorially never expressed itself in favor of any bill yet introduced. It is, therefore, our duty, painful or otherwise, to contradict most flatly and emphatically this statement of the "independent and fearless" trade organ hysterically catering to the nursery interests on the one side, and to the orchard and garden interests on the other. But we have neither time nor space to devote to desultory and irresponsible statements of this kind. We are more concerned in discovering a method which will harmonize the desires of the official entomologists with the trade necessities of the nursery industry. Granted that we cannot ask less of foreign importers than we demand of interstate shippers, and the question then arises, how are these diverging views and requirements to be amalgamated? There seems to be only one way. That is for representatives of the two parties interested to come together and thresh it out. Neither side can claim a monopoly of the knowledge bearing upon either pest inspection or trade requirements. The entomologists possess valuable technical knowledge; the nurserymen, through dearly bought experience, are familiar with the practical issues. Therefore, in this conference each party should supplement the other.

It is exceedingly unfortunate that the parties to the proposed measure should have drifted away from each other, and apparently through no fault of the nurserymen. One thing is clear, and that is that the nurserymen now stand together unitedly on the question, so that if any contest does arise they will meet it with a more solid front than ever before. We have constantly urged the desirability of joint conferences. Representatives of the Department of Agriculture were invited to attend the last meeting of the American Association of Nurserymen. They did not appear. Why not?

HOW TO EXTEND OUR WHOLESALE MARKETS

By E. S. WELCH, Shenandoah, Iowa

The question of the extension of our wholesale markets is an important subject that I shall discuss briefly. In many cases, the nurserymen who grow stock extensively must depend largely upon selling their product at wholesale to the retailer.

For the production of the best class of trees, shrubs, etc., the personal attention of the owners of a large nursery plant is usually required. It is often difficult to find time to distribute the product direct to the ultimate consumer.

All of us can help extend our wholesale markets by producing a better grade of trees, by being careful to grow the hardiest and most desirable varieties, and by encouraging the distribution and planting of such stock as will give the planter the best possible results.

Superior varieties of nursery stock properly grown, when planted, will be the means of increasing the demand for desirable stock at prices profitable to the grower.

The introduction of valuable fruits, ornamentals, roses, vines, etc., such as Jonathan, Wealthy, and Delicious apples; Montmorency, Bing, and Wragg cherries, the Japanese varieties of plum; Weeping Birch, Elm, and Mulberry; Frau Karl Druschki and Rambler Roses, Clematis paniculata and other varieties, too numerous to mention, have been the means of a wonderful extension of the wholesale market for nursery stock.

The nurseryman can materially assist in creating a demand for the best and most desirable varieties, by planting freely himself, and giving the necessary attention to produce the best possible results.

He should be an active member of the improvement clubs, and various organizations interested in civic improvements, and he should take the lead in organizing them, not from a selfish standpoint alone; for he should realize the great benefits that will accrue to all communities from the planting of trees, flowers, roses, etc. While such activity will enlarge the markets for nursery products, as a patriotic citizen, it is the duty of the nurseryman to encourage the beautifying of our Nation. What is there that will add to the beauty and value of real estate like the planting of fruit trees and ornamental nursery stock?

The nurseryman who can develop and introduce additional varieties of superior merit in all lines of horticulture, will materially assist in the extension of our markets. The development and improvement of our Nation in growing fruits, of recent years, has created a greater necessity for growing trees in wholesale quantities. Street, park, and ornamental planting is rapidly following in all parts of our country; hence the nurseryman has a broad field for the development and extension of our wholesale markets.

THE STANDARDIZATION OF GRADES

By W. F. HEIKES

I have been asked by the committee on the program to give the Association an expression of my views upon the subject of the "Standardization of Grades." As it is somewhat difficult for me to speak on this subject, with which I have had so much to do the past fifty years, without bringing in my personal experiences, I trust I may be pardoned for any seeming egotism.

The importance of having a fixed rule for determining the sizes of the trees and plants grown for sale by nurserymen has long been recognized, as any one may see by consulting the various catalogues and price lists issued by them for many years past. It will be apparent that the grading by different nurserymen as shown in their price lists does not follow a fixed standard.

Governed by my experience, I would recommend making six to eight grades in the leading kinds of fruit trees, as a rule

allowing only the difference of a sixteenth of an inch in caliper between the grades. This would more especially meet the needs of the wholesale growers. It is desirable that the particular point on the tree and plant where the caliper is taken should be definitely established, and that the character of the tree and plant belonging to each grade be more accurately described than is now customary.

I believe it would be possible through the influence of this Association to bring about an agreement among nurserymen to adopt a more uniform description by grades than that now in vogue, one that would simplify matters and prevent much of the confusion and misunderstanding likely to occur between the buyer and seller as long as the present lack in uniformity of grading exists.

The following story may be of interest to you as it explains how the privilege happened to come to me of being the first nurseryman to apply a caliper to a tree in order to learn the grade to which it belonged.

At the age of 20, I was admitted by my father as a partner in his nursery business at Dayton, Ohio, the name of the new firm being Jacob Heikes & Son. At that time, and in later years, we were large buyers of standard and dwarf pears and every Fall I was delegated to go "Down East" to buy. It would be difficult for you to imagine, under the trade regulations existing today, the difficulties which in those days an unsophisticated young man from the West encountered when trying to deal with the older nurserymen at Rochester, Geneva, Syracuse, Lockport, and Dansville. No standard of grading had been established, and "First Class" and "No. 1" were very indefinite terms.

I had a predilection for buying of a certain firm, consisting of three partners. The eldest would sell me the trees in the most charming, gentlemanly way, all to be first class; the next in age was the digger and packer, who would, in the most smiling manner, dig with the utmost exactness, before my eyes, a size smaller than I had expected, but, mind you, without any wrong intent. The youngest member of the firm was the treasurer and collector. He never smiled and never shaded the prices made by the seller. My high respect and admiration for the men composing this firm has always remained a pleasing memory of bygone days and had a standard of grades been then in use I should not have been tempted to relate this incident in connection with this subject.

I began to realize that as a matter of necessity I was obliged to adopt some plan to secure the exact grade of trees wanted at a specified price. It soon occurred to me that the caliper and age of the tree should be stated and agreed upon in making my purchases. The next step was to find a caliper with which to make the measurements. It was found that the ordinary caliper used by mechanics answered the purpose fairly well, but desiring a more suitable instrument I designed later the first nurserymen's caliper, which proved to be quite satisfactory and which to this day, along with others more recently introduced, meets every requirement.

Seeing the great advantage of following a rule in grading, it gradually dawned upon me that a further advantage might be gained in printing prices by grade in our price list, and we later also took the lead in printing the grade count in our Fall and Spring price lists, showing the number of each variety by

grade and quoting at the same time the price for each grade.

This innovation has evidently become quite popular as it has been adopted by many of the leading nurserymen. It has proven a great saving of time and correspondence, and facilitates the bringing together of buyer and seller. This plan also aids in determining the condition of the trade by showing the number, grades and varieties of trees upon the market.

A further improvement can be made in this plan by nurserymen being more exact in giving the numbers of trees and issuing their price lists oftener, and, I might add, by printing more uniform prices.

STANDARDIZATION OF RETAIL PRICES

ABNER HOOPES, Westchester, Pa.

Your Program Committee has asked me to read a paper on the standardization of retail prices. This is a subject in which all nurserymen should be deeply interested, as it is a fundamental principle of successful business.

It seems to me that the best way to accomplish the standardization of price is, if possible, to have a standardization of value. Most articles of merchandise have a fixed intrinsic value. If you go to a silversmith's to buy his wares, you will find the silver stamped according to its value—whether sterling or plated—and his articles in gold valued according to their assay. The Government requires this for the protection of the purchaser. Now, no matter to what city or to what shop you go, you will find that the intrinsic value of gold and silver will be relatively the same; in other words, there is a standardization of price because of the STANDARDIZATION OF VALUE.

This is also the case in most other commercial commodities, therefore, why should it not hold good with nursery products? As the Government has no means of weighing or measuring (in this sense) the intrinsic value of nursery stock and putting upon it an official value, the purchaser of nursery stock is obliged to wait in many cases years before being able to determine the real value of the goods and is necessarily dependent upon the integrity of the nurseryman as to its reliability. The nurseryman devotes his land, time, labor and capital to the production of his goods. If he grows stock by modern methods, fighting and destroying the numerous pests and successfully contending with climatic and other unfavorable conditions, it is only right that he should receive a price for his product which will justly and fairly compensate him for his trouble, expense and capital invested, as well as the risks he is obliged to take. Every nurseryman should charge a price that will enable him to deliver goods of "sterling" value.

If nurserymen generally would co-operate in the production and offering for sale of only stock of the highest standard of quality, there would necessarily be a standardization of price, and nurserymen would find that the prices they would be justified in charging for such stock would show a profit adequate to the capital invested.

By standardization of prices, I do not mean a combination to fix prices, but rather a uniformity of price as an aid to the establishment of the confidence of the customer. Nothing is more injurious to business or more unjust than the sliding

scale or the so-called "elastic" price, which expands for one man and contracts for another. No doubt many of us remember the old system of conducting business in clothing stores: When a fellow came to town to buy a suit of clothes, he seldom expected to pay the "asking price," but after selecting the suit he wanted he always expected to do more or less "bargaining," and after getting all he could throw off (and sometimes a railroad ticket thrown in) the deal was closed. Frequently after getting home and looking his suit over; the buyer wondered if he really had gotten the bottom price. A very unsatisfactory and unstable way of conducting business—not good for the customer nor for the merchant! Now-a-days under advanced business methods, prices for the same grade of goods are relatively the same everywhere, and it would not occur to a man to go into a reliable store and "dieker" over prices where goods are marked in plain figures.

Although I was only asked to talk on retail prices, I am tempted to say a few words to the wholesalers. Panic struck the cherry market last spring. The price started during the winter at ten cents, which is as low as cherries should be sold, but "A" got frightened and issued his surplus list the last of January quoting cherries at eight cents. "B" was about getting his list out and seeing "A" was cutting prices, went one better and put them at seven cents. "C" thought he would close out his stock by quoting them still lower, so offered them at six cents. Later on I saw them quoted in several lists at five cents.

Now there is a certain quantity of cherries wanted each year and the demand cannot be increased by cutting prices, so that as a result of putting prices below cost, not a single additional tree was sold and there will be just as many trees burned as though the prices had been kept at a normal figure; the nurseryman is no better off even though he sold twice the number at half the price, while next fall it will be hard work to get those people who bought five cent cherries last Spring to pay ten cents for them another year. It has been said that the brush heap is a profitable adjunct to the nursery business, and while in the above sense it may be a good adjunct to the nursery business, it would be a better adjunct if the brush heap were used for the burning of all stock of inferior quality, so that good stock could be kept up to a high standard of price and not sacrificed. It is a mistake to sacrifice profits and good business methods for the sake of getting rid of a surplus one season because there happens to be no particular demand for that line of goods that year.

In an experience of over fifty years in this business, I have found that intelligent buyers will readily pay a good price for nursery stock if they can be guaranteed that the stock will be of the highest standard of quality and reliability.

HOW TO EXTEND OUR RETAIL MARKET

J. M. PITKIN, Newark, N. Y.

To the man who is strictly a grower the best advice is "Help the Retail Nurserymen," and do nothing that interferes in any way with the Retail Nurserymen selling to the retail buyer.

There are firms in the nursery business who have at a great expense worked up a force of Salesmen, or as they are sometimes called, a force of Tree Agents. While some of the firms

controlling a good sized force of agents are growers themselves, they are also buyers from the grower members of this Association. Some of the firms controlling an agency force are exclusively buyers, not growers, and buy from the grower members of the Association.

To extend our Retail Market is of benefit to each grower member of the Association. The main demand for Nursery Stock has been brought about by the effort of the Retail Agent.

The retail market uses up a large proportion of the entire stock grown—and to secure retail orders now costs the retail Nurserymen considerable money. Without the Retail Market that comes through the effort of the Retailer, the grower members of the American Association would find their business greatly curtailed, or would find the expense of doing their business greatly increased.

From a Retailer's side of the question I want to acknowledge the most cordial support given the Retail Nurserymen by the Jackson & Perkins Co., (who will pardon my being personal) who refer the retail inquiries for prices which they receive, to Retail Nursery firms, to answer and make quotation, and thereby this Company is certainly and surely making a move that does extend our Retail Markets. This is actually supporting the Retail Nurserymen.

The present demand for Nursery Stock is the result of the work of the humble and much abused Tree Agent, and if he has been the means of bringing the business up to its present magnitude, then every grower, large or small, should lend a helping hand to the Retail Nurseryman and thus *extend our Retail Market*.

You ask a Church man how to extend Home Missions, and he will say: *Support it*. You ask a Baseball Fan how to extend the Baseball game and he will say—*support it*.

Now, Mr. Grower, the answer to this subject—"How to Extend our Retail Market," must be—*support it*; that is, support the Retail Nurseryman in his great work of creating a demand for fruit and ornamental goods, as that is what he is doing, by means of a force of salesmen.

EATING AN APPLE

"Do you know what you're eating?" said the doctor to the girl.

"An apple, of course."

"You are eating," said the doctor, "albumen, sugar, gum, malic acid, gallic acid, fiber, water and phosphorus."

"I hope those things are good. They sound alarming."

"Nothing could be better. You ate, I observed, rather too much meat at dinner. The malic acid of apples neutralizes the excess of chalky matter caused by too much meat, and thereby helps to keep you young. Apples are good for your complexion. Their acids drive out the noxious matter which cause skin eruptions. They are good for your brain, which those same noxious matters, if retained, render sluggish. Moreover, the acids of the apples diminish the acidity of the stomach that comes with some forms of indigestion. The phosphorus, of which apples contain a larger percentage than any other fruit or vegetable, renews the essential nervous matter of the brain and spinal column. Oh, the ancients were not wrong when they esteemed the apple the food of the gods—the magic renewer of youth to which the gods resorted when they felt themselves growing old and feeble. I think I'll have an apple," concluded the doctor.—*New York Tribune*.

MEMBERS PRESENT AT ST. LOUIS CONVENTION

T. S. Hubbard Co., Fredonia, N. Y., represented by W. L. Hart, Secy.; J. G. Harrison & Sons, Berlin, Md., represented by Orlando and G. Hale Harrison; Irving Rouse, Rochester, N. Y.; Andre L. Causse, 105-7 Hudson St., New York, N. Y.; George S. Josselyn, Fredonia, N. Y.; Rochester Lithographie Co., Rochester, N. Y., represented by M. B. Fox, Treas.; McFarland Publicity Service, Harrisburg, Pa.; J. Horace McFarland Co., Harrisburg, Pa.; Hiram T. Jones, Elizabeth, N. J.; W. & T. Smith Co., Geneva, N. Y., represented by Thomas C. Carson; C. M. Hobbs & Sons, Bridgeport, Ind.; August Rölker & Sons, 31 Barclay St., New York, represented by August Rölker; The Benjamin Chase Co., Derry, N. H., represented by John C. Chase; Thomas Meehan & Sons, Dresher, Pa., represented by Thomas B. Meehan; P. J. Berckmans Co., (Inc.), Augusta, Ga., represented by L. A. Berckmans; Stark Bros. Nurseries & Orchards Co., Louisiana, Mo.

McHutchison & Co., 17 Murray St., New York, represented by J. McHutchison and C. B. Knickman; Ellwanger & Barry, Rochester, N. Y., represented by W. C. Barry and C. J. Maloy; D. Hill Nursery Co., Dundee, Ill., represented by D. Hill; Peter Youngers, Geneva, Nebr.; A. J. Brown and Wife, Geneva, Nebr.; United Litho and Printing Co., Rochester, N. Y.; The Fruit Grower Co., St. Joseph, Mo., represented by C. Work, W. G. Campbell, and E. H. Favor; National Nurseryman Publishing Co., represented by C. L. Yates, Rochester, N. Y., and John Craig, Ithaca, N. Y.; The Mutual Nurseries, Monroe, Mich.; Brown Brothers Co., Rochester, N. Y., represented by R. D. Leutchford; H. J. Weber & Sons Nursery Company, Nursery, Mo.; Painesville Nurseries, Painesville, Ohio, represented by W. C. Harrison and J. H. Dayton; Jackson & Perkins Company, Newark, N. Y., represented by John Watson and C. H. Perkins; Huntsville Wholesale Nurseries, Huntsville, Ala., represented by W. F. Heikes.

Chase Nursery Company, Huntsville, Ala., represented by Henry B. Chase, and Robert C. Chase; Fraser Nursery Company, Huntsville, Ala., represented by James W. Fraser; F. B. Vandegrift & Co., 15-25 Whitehall St., New York, represented by Wm. W. Rich; Knox Nurseries Vincennes, Ind., represented by H. D. Simpson and wife; The Monroe Nursery, Monroe, Mich.; Grand Mere Nursery, Baroda, Mich., represented by E. W. Dunham and H. B. Brown; James J. Britt & Bros., Bentonville, Ark.; W. N. Scarff, wife and two children, New Carlisle, Ohio; David Knight & Son, Sawyer, Mich., represented by A. R. Knight; The Jewell Nursery Co., Lake City, Minn., represented by E. A. Smith; William Street Nurseries, Geneva, N. Y., represented by J. P. Rice; F. H. Stannard & Co., Ottawa, Kansas, represented by F. H. Stannard and E. A. Stannard; Mount Arbor Nurseries, Shenandoah, Iowa, represented by E. S. Welch; H. S. Taylor & Co., Rochester, N. Y., represented by H. S. Taylor; J. F. McCurdy, Marshall, Mo.; E. P. Bernardin, Parsons, Kansas; Swain Nelson & Sons Co., Chicago, Ill.; Marshall Bros., Arlington, Nebr.; The Winfield Nursery Co., Winfield, Kansas, represented by H. S. Baker; Aurora Nursery Company, Aurora, Ill., represented by J. A. Young and wife; A. Hamilton & Sons, Bangor, Mich., represented by H. E. and W. L. Hamilton; J. W. Hinshaw, Eureka, Kansas; J. H. Skinner & Company, Topcka, Kansas; Wild Brothers Nursery Co., Sarcoxie, Mo., represented by A. Wild.

Texas Nursery Company, Sherman, Texas, represented by E. W. Kirkpatrick, John S. Kerr, and C. C. Mayhew; Durant Nursery Co., Durant, Okla., represented by J. T. Foote; German Nurseries and Seed House, Beatrice, Nebr., represented by Carl Sonderegger and son; James Jeffrey, Kalamazoo, Mich.; Willis Nurseries, Ottawa, Kansas, represented by A. Willis; Hart Pioneer Nurseries, Fort Scott, Kansas, represented by Bert S. Carnes; J. F. LeClare, Rochester, N. Y.; E. G. Hill, Richmond, Ind., represented by E. H. Maine; The Elm City Nursery Co., New Haven, Conn., represented by W. E. Campbell; J. Jenkins & Son, Winona, Ohio, represented by E. M. Jenkins and wife; N. E. Copcland & Co., Oakland, Kansas, represented by N. E. Copcland and wife; New England Nurseries, Rochester, N. Y., represented by William Pitkin; N. W. Ayer & Son, Philadelphia, Pa., represented by Frank B. White; New Haven Nurseries, New Haven, Mo., represented by J. Bagby; A. B. Morse Co., St. Joseph, Mich., represented by A. B. Morse; The Wolverine Co-Operative Nursery Co., Ltd., Paw Paw, Mich., represented by G. E. Prater, Jr.; C. M. Hooker & Sons, Rochester, N. Y., represented by C. M. Hooker. The United States

Nursery Company, Roseaeres, Miss., represented by S. W. Crowell; American Fruits Publishing Company, Rochester, N. Y., represented by R. T. Olcott.

Des Moines Nursery Company, Des Moines, Ia., represented by J. W. Hill; Cutler & Downing Co., Benton Harbor, Mich., represented by F. J. Cutler; Prudential Nursery Company, Kalamazoo, Mich., represented by C. A. Kreill and O. J. Richardson; Frank Wild Floral Co., Sareoxie, Mo., represented by Frank Wild; Charlton Nursery Company, Rochester, N. Y., represented by E. S. Osborne; C. H. Kessler, Kansas City, Mo.; W. H. Roeder, Osceola, Mo.; Hooker, Wyman & Co., Rochester, N. Y.; Hoopes Bro. & Thomas Company, West Chester, Pa., represented by Abner Hoopes, wife, and granddaughter; Hopedale Nurseries, Hopedale, Ill., represented by J. W. Griesemer; Samuel E. Blair, Nutley, N. J.; Bloodgood Nurseries, Flushing, N. Y.; J. C. Hale Nursery Co., Winchester, Tenn., represented by J. C. Hale; Cooper & Rogers, Winfield, Kans.; Boonville Nurseries, Boonville, Mo., represented by A. E. Barnes; W. T. Hood & Co., Richmond, Va., represented by W. T. Hood; L. F. Dintelmann, Belleville, Ill.; P. Ouwerkerk, Weehawken Heights, N. J.; J. Van Lindley Nursery Co., Pomona, N. C., represented by J. Van Lindley; Pan Handle Nurseries, Greenfield, Ind., represented by E. A. Henby, wife, and children.

E. Y. Teas & Son, Centerville, Ind., represented by E. Y. Teas; Better Fruit Publishing Co., Hood River, Ore.; The Corn Belt Nursery and Forestry Association, Bloomington, Ill., B. J. Vandervoort; The Good & Reese Company, Springfield, Ohio, represented by Frank E. Good; Harrison Nursery Company, York, Nebr., represented by W. A. Harrison and wife, and H. S. Harrison and wife; Dayton Fruit Tree Label Co., Dayton, Ohio, represented by R. C. Stoehr and wife; G. W. Sheldon & Co., Chicago, Ill., represented by E. E. Marks; The Sherman Nursery Co., Charles City, Iowa; Vaughan's Seed Store, Chicago, Ill.; Mount Hope Nurseries, Lawrence, Kansas, represented by W. S. Griesa; The Cunningham Nursery Co., Rising Sun, Ind.; The New England Nurseries, Inc., Bedford, Mass., represented by A. E. Robinson; Knoxville Nursery Co., Knoxville, Tenn., represented by A. J. Smith; Climax Nursery Co., Horatio, Ohio; Herbert Chase, Delta, Col.; F. T. Ramsey & Son, Austin, Texas, represented by J. M. Ramsey; Vine Hill Nursery Co., Mt. Pleasant, Texas, represented by M. G. Black; Allen-Bailey Co., Dansville, N. Y., represented by J. A. Bailey; Reilly Bros. Nurseries, Dansville, N. Y., represented by J. H. Reilly; Washington Nursery Co., Toppenish, Wash., represented by F. A. Wiggins; Kelly Bros., Dansville, N. Y.

Easterly Nursery Co., Cleveland, Tenn., represented by W. A. Easterly; H. R. McNair, Dansville, N. Y.; The Coe, Converse & Edwards Co., Fort Atkinson, Wis.; The Fremont Nurseries, Fremont, Nebr.; C. W. Carman, Lawrence, Kans.; W. E. Collins Co., Fennville, Mich., represented by W. E. Collins; Clinton Falls Nursery Co., Owatonna, Minn., represented by M. R. Cashman; The Commercial Nursery Co., Winchester, Tenn., represented by Harry Nicholson; Wm. Moeller, Creve Coeur, Mo.; Sanders' Nurseries, St. Louis, Mo., represented by C. C. Sanders. The Inee Nursery Co., Lawrence, Kansas, represented by J. N. Inee; The Deming Company, Salem, Ohio, represented by W. H. Meyerhofer; F. E. Schifferli, Fredonia, N. Y.; The Whiting Nursery Co., Yankton, S. D., represented by Geo. H. Whiting; The Griffing Brothers Co., Jacksonville, Fla., represented by C. M. Griffing; Smith Bros., Concord, Ga.; The Rossville Nurseries, Rossville, Kansas, represented by T. P. Oliver; Milton Nursery Company, Milton, Ore., represented by M. W. Miller; Clarence H. Weeks, Lyons, N. Y.; John Siebenthaler, Dayton, Ohio; The Spaulding Nursery and Orchard Co., Springfield, Ill., represented by Geo. W. Marahn; The Kelsey Nurseries, St. Joseph, Mo., represented by C. G. Ferguson; The Vienna Nursery Co., Vienna, Ill.; Western Nursery Co., Lawrence, Kansas, represented by C. W. Murphy; C. H. Weber, Greenfield, Ind.; W. A. Drummond, St. Louis, Mo.

Graham Nursery Co., Mechanicsville, Iowa, represented by J. M. Graham and wife; Plumfield Nurseries, Fremont, Nebr.; The Deming Co., Salem, Ohio; Spielman Bros., Adrian, Mich., represented by John Spielman; F. & F. Nurseries, Springfield, N. J.; May Bros., Sedalia, Mo., represented by W. M. and P. A. May; C. R. Burr & Co., Manchester, Conn.; The Southwestern Nursery Company, Okemah, Okla., represented by C. M. Redmand; Jim Parker, Tecumseh, Okla.; Sunshine Nurseries, Corydon, Ind., represented by Joe T. McClaran;

Klehm's Nurseries, Arlington Heights, Ill., represented by Mr. Klehm and wife; The Willadean Nurseries, Sparta, Ky., represented by J. F. Donaldson; The Elizabeth Nursery Company, Elizabeth, N. J., represented by E. Runyan; Peters Nursery Company, Knoxville, Tenn., represented by R. E. Gettys; The Morris Nursery Co., West Chester, Pa., represented by Miss Martha G. Lear; Ernst Nurseries, Moscow, Ohio, represented by Charles Ernst; Maywood Nursery Co., Maywood, Ill., represented by Z. C. Smith and wife.

The Shenandoah Nurseries, Shenandoah, Iowa, represented by D. S. Lake, A. F. Lake, J. H. Wallace and Edith Lake; Saddler Brothers Nurseries, Bloomington, Ill., represented by Wm. Saddler and wife; The Paw Paw Nurseries, Paw Paw, Mich., represented by J. A. Nelson and Son; F. W. Meneray Crescent Nursery Co., Council Bluffs, Iowa, represented by F. W. Meneray; South St. Louis Nurseries, St. Louis, Mo., represented by J. W. Schuette and wife; L. R. Taylor & Sons, Topeka, Kansas, represented by E. R. Taylor, wife, and son; The Griesa Nurseries, Lawrence, Kansas, represented by A. H. Griesa; Parker Bros. Nursery Co., Fayetteville, Ark., represented by Geo. Parker; Southern Nursery Co., Winchester, Tenn., represented by E. W. Chattin and A. Pattie; The Leedle Floral Company, Springfield, Ohio, represented by Geo. D. Leedle; Peter Bohlender & Sons, Tippecanoe City, Ohio; Foster & Griffith, Fredonia, N. Y., represented by J. H. Foster and R. B. Griffith; Rosemont Nurseries, Painesville, Ohio, represented by A. F. Bernard and wife; Vincennes Nurseries, Vincennes, Ind., represented by W. C. Reed, wife and son; Burns City Nurseries, Burns City, Ind., represented by F. B. Garrett; Franklin Davis Nursery Co., Baltimore, Md.; Maple Bend Nursery, Perry, Ohio, represented by T. B. West; H. S. Wiley & Son, Cayuga, N. Y., represented by H. S. Wiley; W. W. Thomas, Anna, Ill., represented by James W. Thomas; J. A. Lopeman, Enid, Okla.

The Northern Nursery Co., Denver, Col., represented by G. G. Ferguson; Turkey Creek Nursery, MacClenny, Fla., represented by C. F. Barber; Barnes Nurseries, Cincinnati, Ohio, represented by J. J. Barnes; Perfection Manufacturing Co., Detroit, Mich.; Bryant's Nurseries, Princeton, Ill., represented by Guy A. Bryant and Miles W. Bryant; Chas. M. Peters, Salisbury, Md.; Custer Bros., Normal, Ill., represented by Frank Custer and wife; C. M. Hurlburt, Fairbury, Nebr.; Miles Estep, Bethany, Mo.; J. B. Pilkington, Portland, Ore.; The Jeschke Mfg. Co., Bellevue, Ohio, represented by S. M. Wolf; H. C. Irish, St. Louis, Mo.; The Greening Nursery Co., Monroe, Mich.; C. L. Watrous, Des Moines, Iowa; Tennessee Wholesale Nurseries, Winchester, Tenn., represented by E. W. Chattin; Jacob Uhl, Dansville, N. Y.; Clarence Wedge, Albert Lea, Minn.; Lewis Roesch & Son, Fredonia, N. Y.; The Farmers' Nursery Co., Troy, Ohio, represented by T. J. Densmore; The Bay State Nurseries, North Abington, Mass., represented by W. H. Wyman; Thos. A. McBeth, Springfield, Ohio; Burton & Son, Upper Alton, Ill., represented by H. M. Burton and wife; D. T. McCarthy & Sons, Lockport, N. Y., represented by D. T. McCarthy; Fountain Cutlery Company, Philadelphia, Pa., represented by T. C. Lippincott.

NURSERYMEN WHO ATTENDED THE CONVENTION IN YATES' SPECIAL CAR

Geo. S. Josselyn, Fredonia, N. Y.; John Hall, Secretary, Rochester, N. Y.; Wm. Pitkin, Rochester, N. Y.; Thos. Brown, Steehert Litho., Rochester, N. Y.; E. S. Osborne, Charlton Nur., Rochester, N. Y.; Horace Hooker, Rochester, N. Y.; M. B. Fox, Rochester Litho., Rochester, N. Y.; R. D. Leutchford, Rochester, N. Y.; Vredenburg, Rochester, N. Y.; C. L. Yates, Rochester, N. Y.; Jas. Pitkin, P. M., Newark, N. Y.; John Watson, Jackson & Perkins, Newark, N. Y.; C. R. Burr, Manchester, Conn.; Jas. McHutchison, New York City; John Craig, Ithaca, N. Y.; J. P. Rice, Geneva, N. Y.; T. C. Carson, Geneva, N. Y.; J. A. Bailey, Dansville, N. Y.; John Morey, Dansville, N. Y.; J. H. Reilly, Dansville, N. Y.; D. T. McCarthy, Dansville, N. Y.; W. E. Campbell, New Haven, Conn.; C. A. Bennett, Robbinsville, N. J.; C. H. Weeks, Lyons, N. Y.; Orlando Harrison, Berlin, Md.; Hale Harrison, Berlin, Md.

The foresighted man is one who anticipates the selling game by placing his goods before the public a long time before the season opens.

THE NEW YORK AND NEW ENGLAND DELEGATION

It was a "merry bunch" that congregated in the special car leaving Buffalo at 11 P. M., on Monday night over the New York Central Lines for St. Louis, under the skillful and diplomatic chaperonage of Charlie Yates. In the first place, the car was full; only a single upper remained unoccupied. The Rochester delegation was there in full force, and in high spirits, with Eddie Osborne as chief of the commissary department, ably assisted by Mr. Leutchford, who dispensed the delicacies of the buffet to a group of eager recipients. The music of the "Rochester chanters" was, as usual, original and catchy.

The delegation increased in size as it journeyed towards St. Louis, arriving there at least two cars strong, to find that delegations from the Middle West had reached the city only a short time earlier.

Correspondence

DUTY ON FRUIT STOCKS

Editor NATIONAL NURSERYMAN,

I would like to know what advantage there is in keeping a duty on Apple and Pear Seedlings of \$2.00 per 1000 when some of the American growers only filled 40 to 60 of their orders and some did not fill any of their contracts made in Jan., 1910. If not placed on the free list as a whole, why not place the two larger grades on the free list. I mean 7 to 12 millimeters and 6 to 10 millimeters. The nurseryman could then get better seedlings to plant and he could give the fruitgrower better trees for the same money. Let the duty stand on the small grades to keep them out of the trade. Plum, Cherry, and Quince might be included in the latter category. Why pay the Government thousands of dollars which, of course, must be added to the selling price of the trees?

Signed

A NURSERYMAN.

Who has Orchard Interests as Well.

Our Book Table

ELEMENTS OF AGRICULTURE, by G. F. Warren, Professor of Farm Management and Farm Crops, New York State College of Agriculture, Cornell University. 5 x 7 3/4, 434 pp., including appendix and index, 25 plates. The Macmillan Co., New York. Price \$1.10 net.

Though designed for the high school, this text will meet the desire of the farmer or general reader for a brief scientific survey of agriculture. It purposes to make the teaching of agriculture as extensive and thorough in its scope as the teaching of any other science in the high school and to bring the study into intimate relation with the daily life of the student and his community.

After an introduction to the study, the laws controlling the improvement of plant and animal life, the propagation of plants, and their food are treated, and each chapter of the book is completed with laboratory exercises and collateral reading references. A study of the soil and its needs, how to maintain its fertility, some important farm crops and their enemies follow. The text then takes up the systems of cropping, feeds and feeding, and devotes several chapters to the horse, cattle, sheep, swine, and poultry. The last three chapters discuss the farm, its management, its home, its community. The appendix comprises 16 tables of fundamental agricultural data.

AN INTRODUCTION TO THE STUDY OF AGRICULTURAL ECONOMICS. 7 1/2 in. x 5 in. 527 pages. Price \$1.25. Published by The Macmillan Co. Author, Henry C. Taylor.

The possibility of presenting this subject in satisfactory form to students of the agricultural colleges has been a subject of considerable inquiry and study for a few years past. Several courses have been

offered, but it is a question whether any one has given satisfaction either to the teacher or the student. The present volume is an attempt, and apparently a very successful one, to classify and co-ordinate the various factors which should be included in a study of this broad and varied field. The author is assistant professor of political economy in the University of Wisconsin, and has made this a subject of special research. The captions of a few of the chapters will indicate the scope of the work. Among these we note: The Factors of Agricultural Production, The Economic Properties of These Factors, The Organization of the Farm, as, The Selection of Land and the Capital Goods, The Selection of Crops and the Organization of the Field System, The Size of Farms, and The Principles Which Determine the Size of These, the Principles to be Followed in Estimating the Value of Farm Land and Equipment, The Farmer's Means of Acquiring Land, and finally, The Consideration of Tendency and Land Ownership in the United States. The volume is a teacher's guide rather than a student's text book, although for advanced students it might undoubtedly be used with satisfaction. In any event it is an important contribution to our knowledge of this subject which, more than many others, needs systematizing along pedagogical lines.

Enclosed please find a check for \$2.00 for two years' subscription for THE NATIONAL NURSERYMAN. We enjoy getting this paper very much, and always find it filled with many helpful and interesting articles. We believe that every nurseryman should have this paper on his desk."

C. F. LANSING, Oregon.

Business Movements

KENNEBUNK, ME.—The Franklin Forestry Co. has been organized to raise seedling trees and conduct a general nursery business. Capital, \$10,000. Stockholders: Harry F. Gould, president and treasurer, Watertown, Mass.; Russell S. Langdell, Lowell, Mass.; Walter L. Dane, Kennebunk, Me.—*F. Ex.*

A forward step in the conservation of Missouri's resources has been taken by the University of Missouri in the appointment of Prof. J. A. Ferguson, of State College, Pennsylvania, to the position of Professor of Forestry in the College of Agriculture. Professor Ferguson is a graduate of Yale Forestry School, and has for nearly two years been head of the Department of Forestry at State College, Pennsylvania.

The Rhode Island Nursery Co. is a new organization, formed June 1, with offices at 112 Stewart street, Providence, R. I. The officers are: President and manager, A. M. Hartwell; vice-president and auditor, J. Frank Parker; secretary and treasurer, T. S. Ware. All these men are experienced in landscape work, and Mr. Hartwell has been in the business for many years. He was formerly with C. R. Fish & Co., of Worcester, Mass. Removing to Providence nearly four years ago and engaging in business for himself, he soon built up a large trade.

ROCHESTER, N. Y.—The roses were in their prime at the Ellwanger & Barry nurseries June 21-24, and a general invitation was issued to the people of the city to visit the grounds and enjoy the display, which was accepted by a large number. The climbing roses were a grand sight, presenting an array of so many colors. The newer varieties attracted a great deal of attention, especially Vielchanblau, the blue rose. Goldfinch, a beautiful yellow, and the many new white, pink and crimson varieties.

The nursery business of E. F. Edmundson, at Perry, Ia., has been incorporated, under the name of the Perry Nursery Co. The capital stock is \$10,000. The incorporators are E. F. Edmundson, S. M. Edmundson, Ralph Edmundson, C. E. Wilson and E. B. Wilson.

Sarcoixie, Mo.—Gilbert H. Wild has taken over the peony business of his father, Jas. B. Wild, at the above address. He has marketed 1,000 crates of cut peony blooms this season, averaging nine dozen to the crate, and shipments are made as far east as New York.

J. H. Boyd of the Forest Nursery & Seed Co., McMinnville, Tenn., reports that they have had no rain since early in April and that practically all the cuttings and transplanted stock, and most all the seeds put in beds have been lost.

The Valdesian Nurseries, Bostic, N. C., report that the continued dry weather, which has caused a great loss on late plantings, has been broken by light showers. Fall sales are coming in nicely.

Davenport, Ia.—The entire stock of the Davenport Nursery Co., located at Fernwood ave., and Locust st., has been sold to G. L. Lewis, Evanston, Ill.

Stark Bros. Nursery Co., Louisiana, Mo., contemplates starting a nursery in Iowa and has had a representative looking over available sites.

FRUIT CONDITIONS THE COUNTRY OVER

The middle of May found the indications very promising for large crops of apples and peaches in western New York. Growers have been paying more attention to spraying, and fine quality fruit seems certain.

About Hagerstown, Maryland, an unusual crop of apples is looked for.

Late frosts are the cause of a very short apricot crop for California. Growers are disappointed with peaches and strawberries also. Prunes about San Jose are dropping from the trees in somewhat alarming numbers. The prune crop in the vicinity of Vancouver, Washington, however, promises exceptionally well.

More apple trees are in bearing in Washington than last year, and a larger number of boxes of them is expected, though the apples may be smaller.

The dry weather is likely to cut short an otherwise plentiful strawberry crop in Arkansas.

Michigan is looking for a fruit crop that it will trouble the railroads to handle.

Residents of Utah are happy over the expectation of a fruit crop which will greatly exceed that of last year, the gain being mainly in peaches.

In some sections of Tennessee apples and peaches will be minus, as far as having any to ship out of the state is concerned. Late frosts are to blame for this condition.

Small fruits are abundant in Missouri, with an apple crop not far behind. Conditions are much the same in Kansas, but with a somewhat smaller apple crop.

Frost damaged Colorado fruits again on May 11, but not so seriously as in April.

NURSERYMAN AS A LUMBER USER

An interesting bit of information has come to our desk showing the extent of one firm's business as exemplified by the amount of lumber used and also the bare fact that the nurserymen is an important consumer of lumber. A firm in the Middle West has the following record of packing material used between 1899 and 1911: 7,637,197 feet lumber; 62,000 lbs. strap iron; 1,200 lbs. tacks; 691 cars excelsior; 858 kegs nails.

RANDALL BRANDS OF GRAPE JUICE

For some time we have been sampling special makes of the un-fermented brands of grape juice, and have been much taken with one kind called Randall's Carbo-Grapo. This is pure grape juice livened up by the addition of carbonic gas. It is simply the "charged" or carbonated form. The criticism has been frequently offered that grape juices lacks spice and snap, are insipid, in fact. This may be true of brands which have been boiled excessively, and it was to overcome this possible defect that Mr. Randall devised the carbonated brand. As a basis for non-alcoholic punch, this carbo-grapo type is especially useful. It is manufactured by the Randall Grape Juice Company, Ripley, Chautauqua County, New York.

It looks like a shortage of the good old staple eastern apple, the Baldwin, this year. The Baldwin "bin," is located in Western New York. It will not be quite empty this year, but far from full.

Ben Davis is being planted in Western New York despite much advice to the contrary. The growers seem to want fruit early—even though poor of quality.

NIAGARA AGAIN IN DANGER

Washington, D. C.,—Forty million dollars worth of capital is fighting for the possession of one-quarter of the water flowing over Niagara Falls. This statement, issued from the Washington headquarters of the American Civic Association, will be news to those who have believed that Niagara is safe against threatened depredations and despoliations. The slogan of the campaign now in progress under the direction of J. Horace McFarland of the Association is an appeal to the "real owners" of Niagara, the people, namely to get together and help push the so-called Burton Resolution through Congress before June 29th.

The situation is peculiar. The Waterways Treaty with Canada, signed January 11, 1909, while apparently limiting the amount of water which might be taken from the Falls, has on the contrary increased this diversion. The power developing companies have taken advantage of the outside limitations of the Treaty, and to-day are demanding what will come to 68 per cent more water than is now being drawn into the tunnels for the purpose of turning the giant turbine engines. Next Wednesday, the 10th instant, the Senate Committee on Foreign Relations will have before it joint resolution No. 3, offered by Senator Burton of Ohio. This resolution has been prepared in order to save Niagara from the interests which are attempting to wrest additional free power for their private use. If the statu quo of the water flow is to be preserved, the Burton resolution must pass both houses without amendment. Otherwise, say the friends of the Falls, operations inimical to the welfare of Niagara will be started up according to plans already maturing.

It is estimated that the failure of the Burton resolution will mean an increased income of approximately \$5,000,000 annually for the companies back of the opposition. The method by which the amount of water necessary to yield this enormous return can be taken under cover of the law is simple. The Treaty has established what is known as a "maximum limit of diversion" of 56,000 cubic feet per second; that is to say, 25 per cent of the average flow of 222,400 cubic feet per second, and 30 per cent of other ordinary low water flow of 180,000 cubic feet. These amounts were allowed for diversions for the specific purpose of "power production." But, further, the Treaty places no limit on the amount of water that may be taken for "sanitary and domestic" purposes, thus leaving the way open for still greater diversions. The new enterprises ready to start up work on this basis, together with the increasing diversion sought by the existing plants, fully warrant the general alarm lest the "National ownership" of Niagara shall, whether wholly or in part, pass into untrustworthy and irreverent private hands.

Kansas City, Mo., June 29th, 1911
NATIONAL NURSERYMAN PUB. CO.

We received your favor and enclose money order for \$3.00. Kindly receipt and return enclosed invoice and oblige.

It seems to rain all around us but misses us after all. If we do not get rain soon crops and everything will be mighty short.

Very respectfully,

GEO. H. JOHNSTON

The Shenandoah Nurseries

Offer the usual complete assortment of Nursery Stock including not only the best of all sorts, but also a great many of the dependable new kinds.

Strong on well grown

APPLE, PEAR, PLUM, PEACH, SHADE TREES

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We specialize in

Apple Seedlings Apple Grafts
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Acres of Nursery Grown Forest Tree Seedlings

Glad to quote you prices on anything we can supply

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D. S. LAKE, *Proprietor*

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BUSINESS OPPORTUNITY

A stock interest will be sold and employment given to a young or middle-aged man in an established Nursery Co. (Inc.) with a business approximately \$22,000 to \$25,000 this year. Business will likely soon run to \$30,000 or over. Large nearby retail trade. Address

X, care The National Nurseryman,
ROCHESTER, N. Y.

SITUATION WANTED

By an experienced nurseryman who understands budding and propagating and all branches of nursery work.

Address FRANK VOSTERS,
128 Union St., Elizabeth, New Jersey.

FOR SALE

For Fall delivery, Plum Trees, 1 and 2-yr. Cherry, Pear, Std. and Dwf. Quince, 1 and 2-yr., Apple Buds, 1-yr., Apple Grafts, 2-yr. In carload lots or boxed.

Prices on application. PATRICK O'HARA, Dansville, N. Y.

ORNAMENTAL STOCKS

NURSERIES
420 ACRES

WE GROW

FRUIT TREE STOCKS—All Sizes.
300 varieties of Conifers, 1 to 4 years old.
1200 varieties of Ornamental Trees and Shrubs, 1 to 3 years old.
1600 varieties of New and Old Ornamental Trees & Shrubs in all Sizes.
250 varieties of Climbing Plants.
400 varieties of Conifers, 1 to 4 feet high.
400 varieties of Perennials.
800 varieties of New and Old Roses.

We Have No Agents.
Write direct to us and
ask for WHOLESALE
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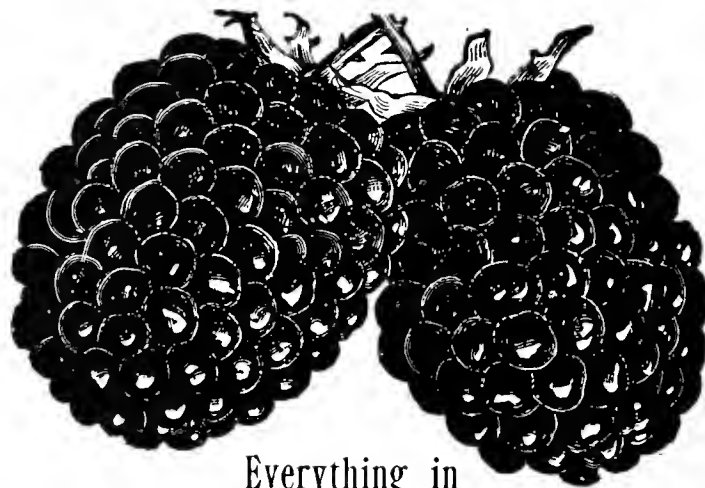
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Stocks, Forest Tree Seedlings,
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Rosa Manetti, Mullylord, etc.

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Everything in

Small Fruit Plants.

Ask for price list.

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For Nurserymen and Florists

The kind that give satisfaction.

Facilities for the handling of your requisite, combined with the quality of our product is unsurpassed.

Samples and prices are at the command of a communication from you.

Dayton Fruit Tree Label Co.

South Canal St., Dayton, Ohio

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Complete line of high-grade Ornamental Trees, Shrubs, Evergreens and Bulbs. SPECIALTIES: Acer, Aesculus, Ampelopsis, Aristolochia, Azalea, Buxus, Clematis, Dielytra, Funkia, Hydrangea, Kalmia, Magnolia, Paeonia, Phlox, Rhododendron, Roses, Standard Roses, Conifers, Tulips, Hyacinths, Narcissus, Crocus, Palms, Bay Trees.

Catalogue on application to our Mr. C. Grootendorst, care of Messrs. P. C. Knyper & Co., 10-12 Broadway, New York.

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Ask also for list of all nursery stock.



Small Fruit Plants for the Nursery Trade, Spring 1911

Black and Purple Raspberry Tips, Red Raspberry, Blackberry, Dewberry, Strawberry, Gooseberry Layer Plants, 1 and 2 years Layered, Orange Quince, Gooseberry and Currant Cuttings, Asparagus, 1 and 2 year old, Horseradish, Rhubarb 1 and 2 year old Roots, also divided Roots. Write for prices.

P. D. BERRY, Dayton, Ohio

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For all information as to Stocks, prices, terms, etc., address

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We Grow a General Assortment of Trees, Shrubs, Vines, Roses and Herbaceous Perennials, Etc.

Prices Reasonable. Wholesale Trade List for the Asking.

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Half-Tone Illustrations of Roses

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OUR YEARLY WHOLESALE LIST OF FIELD ROSES ON OWN ROOTS will soon be issued. If you wish to GO ON OUR MAILING LIST send us your address NOW! Do this regardless of whether we have ever sent TRADE LISTS to you. We are this year trying to cut our mailing list down to actual buyers of ROSES, either FIELD or YOUNG stock. Write us NOW and let's talk the matter over for the coming season. If you do not already know it, it is HIGH TIME that you found out that we are the LARGEST GROWERS in the U. S. of our line.

CALIFORNIA ROSE COMPANY, Pomona, Cal.

Rhododendrons, Hardy Hybrids, named in the best modern American varieties, Andromeda florabunda, Ericas, Azaleas, Kalmia latifolia, and other American plants.

Pinus Cembra, Retinosporas in variety, Box in variety, Golden Privet, Copper Beach, and other ornamental Trees and Shrubs.

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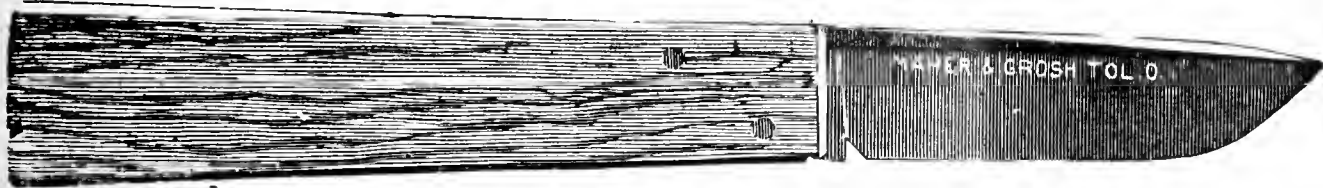
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STOP USING SOFT, SPONGY SEEDLINGS GROWN ON
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A Fine Lot of JAPAN PEAR SEEDLINGS, APPLE,
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Here's a Mighty Fine Opportunity

for a Good Man who knows the Nursery Business,
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I own one of the best greenhouse and nursery plants in the country—50,000 feet of glass is now in carnations and 130 acres in general nursery stock. I am a banker, a mighty busy man, and cannot give this enterprise the attention it deserves. A reliable nursery firm, or a competent man who possesses good business ability, will be sold a half interest at a fair price and on reasonable terms. It is desirable—but not absolutely necessary—that such a man should have a knowledge of greenhouse management and a married man is preferable. This locality is unexcelled for growing many kinds of nursery stock, and I believe it is an opportunity for a nursery firm or a capable man to establish a splendid business. If you feel that you are the type of a partner I am looking for, and can invest from \$15,000 to \$20,000 write to me at once.

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Peach budders, who know how, wanted now. Box 2, Harrisburg, Pa.

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OFFER FOR FALL 1911

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Oregon Grape, Huckleberry, Salmonberry, Blackberry, Rhododendrons, Flowering Currants, Ferns, Madronas, Firs and other natives of the Pacific Northwest Coast.

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Cherry—One Year. All Leading Varieties. Strong on Sweets, such as Bing, Lambert, Luelling, and other Western Sorts.

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5000 Norway Spruce, 2 to 3 feet, and 3 to 4 feet.

Also general line of other stock. *Personal inspection invited.*

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BUDS Apple, Cherry, Pear, Peach, Plum, etc., ready to ship July 1st. Our Growing Nursery Stock is very promising. Prices lower now than later. Big lot of Scions. Write for prices.

John A. Cannedy Nursery & Orchard Co.
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2,000 bushels Natural Peach Seed. Write or wire for prices to **J. E. HARRIS**,
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NURSEYMAN of over 24 years' experience, thoroughly conversant with the propagating and growing of fruit trees, roses (own roots and budded), evergreens, ornamental trees and shrubs. At present handling a staff of men where over \$150,000 worth of stock is sold yearly. Would like to correspond with anyone desiring the services of a manager or superintendent of growing and shipping. State salary offered in first enquiry to **A. B. C.**, care National Nurseryman.

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Large stock of Polyantha (Baby) Roses and Climbing Roses, either on own roots or grafted on Canina.

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Ask for price list.

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Also several carloads of Peach to offer for Fall shipment.

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Pan Handle Nurseries

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Apple	Poplar Carolina	Ampelopsis
Pear	Poplar Volga	Roses
Plum	Elm American	Evergreens
Cherry	Sycamores	California Privet
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CALIFORNIA PRIVET—1, 2 and 3 year, in carload lots—fine.

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NORWAY and SILVER MAPLES.

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Wholesale Growers of Nursery Stock

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Offer for Fall 1911 and Spring 1912

PEACH TREES—fine assortment.

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CALIFORNIA PRIVET, 1 yr., fine plants.

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100,000 PEACH SEEDLINGS from buds for lining out

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PERSIMMONS PRIVET ARBORVITAE

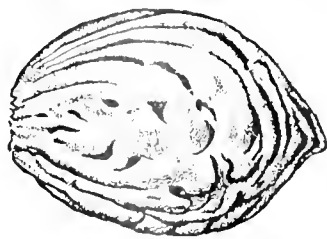
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We have a limited quantity of PEACH SEED, and all orders are taken subject to having the stock on hand.

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The one we have used for years and by far the most satisfactory of any we have ever seen. It does exactly the work for which it was designed and does it right. If interested we will be glad to send description and prices.

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Somewhere among the big, fine blocks of stock in our 2500-acre nurseries, is growing something or some things that you're going to need for your trade this Fall—that you can buy to better advantage here than anywhere else, and that will please your customers mighty well.

Some of these things you will find in the following list; but that is only a little part of all we offer, and whatever you want, we can most probably supply you if you write us for particulars.

PEACH TREES

3,333,333 Budded a Year Ago at Harrison's Nurseries

All these trees are of varieties that we carefully test in trial and fruiting orchards; we therefore know them to be of first quality and strictly reliable. We have over 100 varieties, 1-year buds as follows:

1 inch up, 7 to 8 feet.
 $\frac{3}{4}$ to 1 inch, 6 to 7 feet.
 $\frac{1}{2}$ to $\frac{3}{4}$ inch, 5 to 6 feet.
 $\frac{1}{2}$ to $\frac{3}{4}$ inch, 4 to 5 feet.
 $\frac{3}{8}$ to $\frac{1}{2}$ inch, 3 to 4 feet.
 2 to 3 feet.

APPLE TREES

Apple trees that *succeed*—that are profitable to plant in home or commercial orchards—are our kind, and since you're interested in that sort, too, we'd like to talk it over with you.

We will have three million one-year budded apple trees—5 to 6 ft.

McIntosh	Red Astrachan
Baldwin	Early Harvest
Grimes'	Yellow Transparent
Stayman's	Rome Beauty
Stark	Winesap
Ben Davis	York Imperial
Gano	

and other leading kinds.

900,000 one-year grafts.
 100,000 two-year buds and grafts of
 Baldwin Yellow Transparent
 Rome Beauty Red Astrachan
 Winesap Early Harvest
 York Imperial Ben Davis
 N. W. Greening Gano
 Transcendent Crab Duchess
 Stark
 and others—all well grown. Will have some one inch and up, extra grade trees.

PEAR, CHERRY, GRAPE, ETC.

Such fruits as pear, cherry, plum, grape, berries, vegetable roots, etc., are strong lines with us. We maintain trial and fruiting orchards, giving new varieties careful tests.

We will offer ten million Strawberry Plants next spring. Give us a call.

PEAR TREES

Kieffer

50,000 Kieffer Pear, 2 year $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$ and 1 inch
 50,000 Kieffer Pear, 1 year, 4 to 5 ft., 5 to 6 ft.

All on French roots—no finer grown.

Bartlett

10,000 Bartlett, 3 year $\frac{3}{4}$ and up and 1 inch up.
 No finer grown.
 5,000 Bartlett, 2 year, $\frac{5}{8}$ to $\frac{3}{4}$; also Garber and Clapp's Favorite.

CHERRY TREES

30,000 2 yr. and 3 yr. Sweet and Sour Cherry; leading varieties, $\frac{5}{8}$ and $\frac{3}{4}$ in.
 20,000 1 yr. Sweet and Sour Cherry.

QUINCE

2,000 Quince, 1 year.

GRAPE VINES

10,000 Concord, 2 year, transplanted
 10,000 Concord, 1 year, fine
 10,000 Moore's Early, 2 year transplanted
 Our grapes are in fine shape; the vines will please you.

ASPARAGUS ROOTS

100,000 2 year strong Asparagus roots
 200,000 1 year, leading varieties: Palmetto, Barr's, Conover's, Giant.

ORNAMENTALS

MAPLE TREES

You'll not find a finer lot of maples than we grow in our Nurseries at Berlin; our rich, loose soil encourages root formation, and each tree has plenty of room to grow. Your trade will be pleased with these trees.

NORWAY MAPLES

100 Norway Maples, 3 inches, 12 feet
 1,000 Norway Maples, 2 inches, 10 to 12 feet.
 12,000 Norway Maples, 1 $\frac{1}{2}$ inches, 10 ft.
 13,000 Norway Maples, 1 $\frac{1}{4}$ inches, 9 to 10 feet
 15,000 Norway Maples, 1 inch, 8 to 9 ft.
 110,000 Norway Maples, $\frac{3}{4}$ inch, 7 to 8 feet
 Straight, smooth—no finer grown.

SUGAR MAPLES

1,000 1 $\frac{1}{2}$ inch, 10 feet
 1,000 1 $\frac{1}{4}$ inch, 8 to 10 feet

SILVER MAPLES

1,000 Silver Maples, 3 inches 12 feet
 1,000 Silver Maples, 2 inches, 10 to 12 feet
 2,000 Silver Maples, 1 $\frac{3}{4}$ inches, 9 to 10 feet
 3,000 Silver Maples, 1 $\frac{1}{2}$ inches, 9 to 10 feet
 4,000 Silver Maples, 1 $\frac{1}{4}$ inches, 9 to 10 feet
 5,000 Silver Maples, 1 inch, 8 to 9 feet
 10,000 Silver Maples, $\frac{3}{4}$ inch, 7 to 8 feet

MISCELLANEOUS

1,000 Russian Mulberry, 8 to 10 feet
 1,000 Catalpas, 8 to 12 feet
 1,000 Box Elder, 2 inches
 1,000 American Black Ash, 4 $\frac{1}{4}$ inches
 1,000 Carolina Poplars, 1 $\frac{1}{2}$ inches
 1,000 American Linden, 1 inch
 1,000 American Elm, 1 inch

CALIFORNIA PRIVET

Buy your privet from Privet headquarters—we have acres and acres of it in all sizes and all ages. Can make prompt shipment of any quantity. You can build a reputation for quality on such Privet as this.

5,000 8 feet, 4 year, 9 branches or more
 6,000 7 feet, 4 year, 8 branches or more
 25,000 6 to 7 feet, 3 year, 7 branches or more
 50,000 5 to 6 feet, 3 year, 7 branches or more
 60,000 4 to 5 feet, 3 year, 7 branches or more
 70,000 3 to 4 feet, 3 year, 7 branches or more
 75,000 3 to 4 feet, 2 year, 6 branches or more
 70,000 2 to 3 feet, 2 year, 5 branches or more
 165,000 18 to 24 in., 2 year, 4 branches or more
 160,000 18 to 24 in., 1 year, 3 branches or more
 155,000 12 to 18 in., 1 year, 3 branches or more
 50,000 6 to 12 in., 1 year, 3 branches or more

BERBERIS THUNBERGII

50,000 2 year, 12 to 18 inches
 5,000 3 year, 18 inches
 1,000 4 year, 2 to 3 feet

"First-class trees and plants" means more to your trade than it has ever meant before—one very good way to hold them and please them is to supply them with Harrison's stock.

We will name you a close price on whatever you need, if you write *now*; it's to your advantage to do that anyhow, because stocks are a whole lot more complete now than they will be later on.



This is the way Ray Peach Trees Grow at Harrison's Nurseries

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5,000 Baby Ramblers

RHODODENDRONS, 2,000

AZALEAS, 2,000

SPRUCE, ARBORVITAE, ETC.

There's a great deal in knowing how to grow evergreens successfully. We pride ourselves on the high quality of the product of this department of our Nurseries. Neither time nor money has been spared to procure the best, and the stock we offer is such as you may well be proud to sell your trade. It includes some choice importations from the leading European Evergreen specialists. Get in touch with us before you order your stock for next year.

NORWAY SPRUCE

500 6 feet	500 4 feet
500 5 feet	500 3 feet
	50,000 2 feet

KOSTER'S BLUE SPRUCE

1,000 2 feet	1,000 12 inches
1,000 18 inches	1,000 6 inches

COLORADO BLUE SPRUCE

50 3 to 4 feet 1,000 12 inches 1,000 18 inches

HEMLOCK SPRUCE

100 2 to 3 feet 100 18 inches

GLORY OF BOSKOOP

500 3 feet 500 2 feet

PYRAMIDAL AMERICAN ARBORVITAE

1,000 4 feet 1,000 3 feet 500 2 feet

BLUE CEDAR

500 4 to 5 feet 500 3 to 4 feet

AMERICAN ARBORVITAE

100 3 feet 1,000 2 feet

Harrison's Nurseries
 J.G. HARRISON & SONS PROPRIETORS
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THE NATIONAL NURSERYMAN



AUGUST, 1911

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

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ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI
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Large Stock of

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Complete assortment of Fruit and Ornamental
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Fruit Stocks, Apple, Pear, Mahaleb, Myrobolan, Mazzard, Quince, etc. Also full line of Ornamentals suitable for lining out. Best packing and grading.

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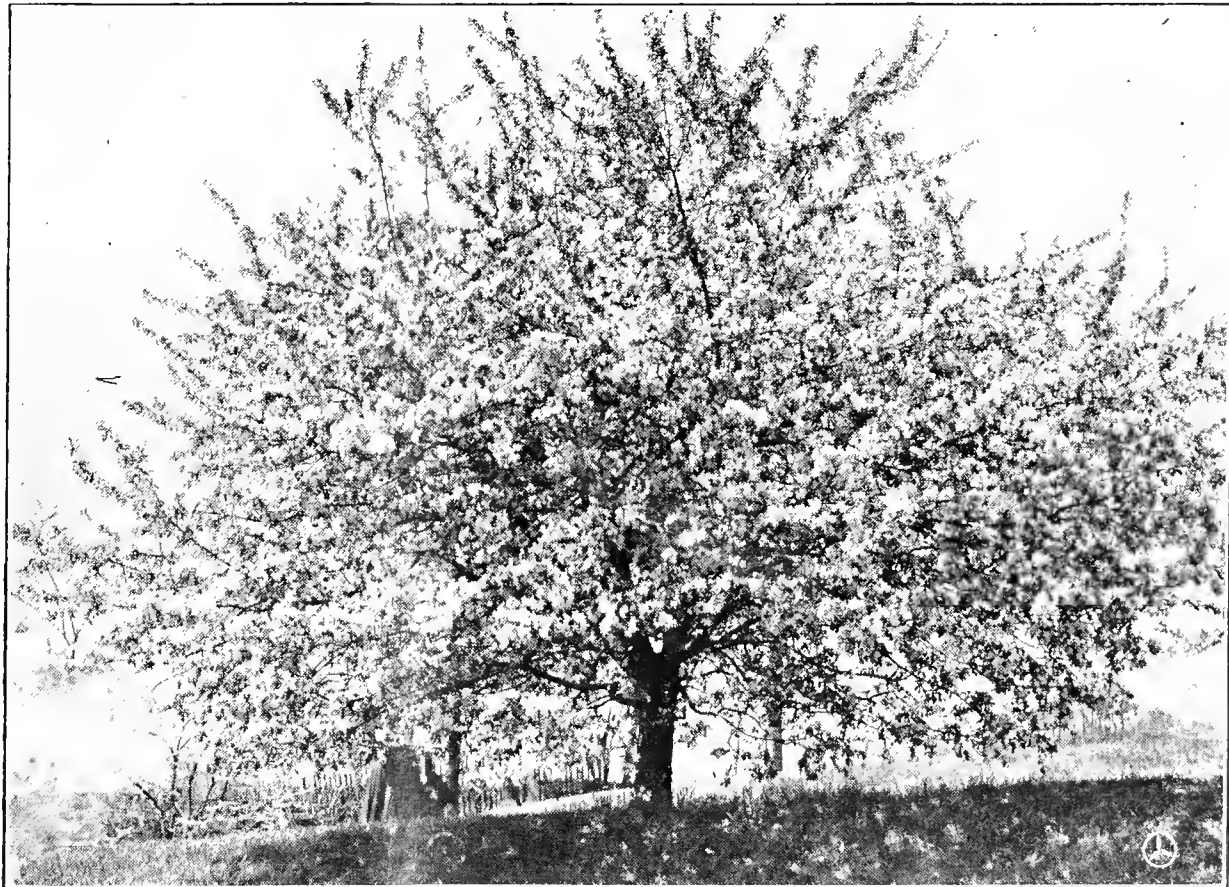
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63 Years

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Nothing can compare among broad-leaved evergreens with the beauty of foliage and flowers of our Southern Magnolia. Magnificent, large white flowers from the middle of April until August. Hardy at Philadelphia. 25,000 pot and field grown plants, all with finely branched roots, no better stock in America. Write for prices.



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EVERGREEN SPECIALIST
DUNDEE, ILLINOIS

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APPLE—1, 2 and 3 year in leading sorts.

CHERRY—1 and 2 year fine stock.

PEAR—1 and 2 year in leading sorts.

PLUM—1 and 2 year Japan, European and native sorts.

PEACH—1 year leading sorts.

PRIVET—1 and 2 year fine stock.

SHADE TREES in car load lots Norway Maple, American Elm, Box Elder, Silver Maple, etc.

We also have a general line of other stock not mentioned above.

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ONE HUNDRED THOUSAND 2-year, heavy California Privet. Special quotations in 50,000 lots. If in the market let us quote you.

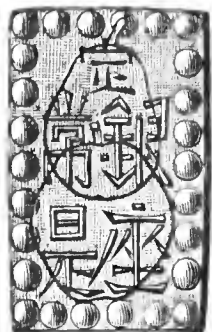
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APPLES—Commercial varieties, one year, in large supply. As fine in quality as ever grown.

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CHERRIES—On Mahaleb. One and two years. Ea. Richmond, Dyehouse, Montmorency, Wragg, Royal Duke, in small supply.

PEACHES—We excel in Peaches, and of these we will have as fine a stock as we have ever grown, both in one year and June Buds.

ROSES—Budded. We will have a large and fine stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.

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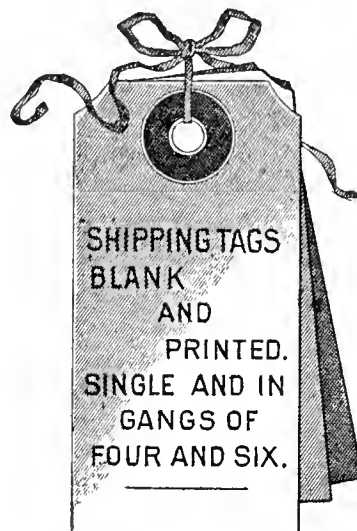
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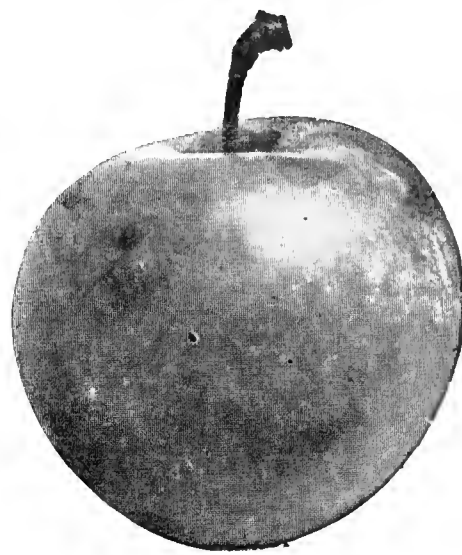
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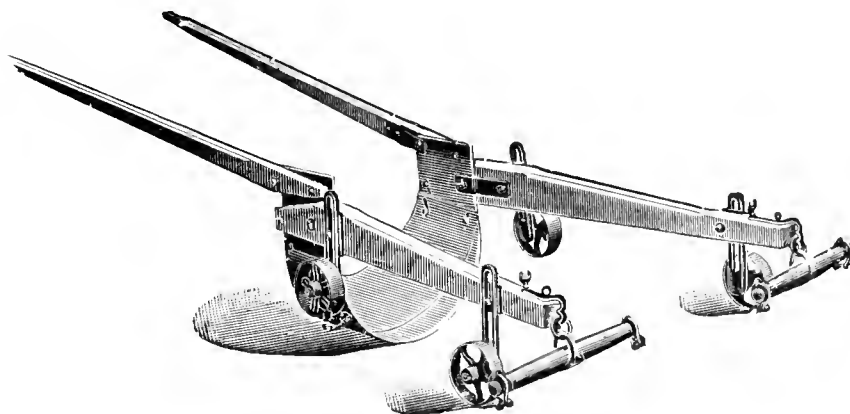
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Some Things of Large Significance to Nurserymen

THE big convention of the American Association is one of these—that so many of the members braved the St. Louis heat for the meeting is decidedly significant.

Of far greater significance is the spirit of the convention—the determination to take no backward step; the splendid support of the progressive policies of retiring President Stark and incoming President Dayton; the growing tendency to fraternize, harmonize, and work for the common, rather than the individual, good.

There are plenty of other straws floating through the atmosphere that indicate the direction of business winds in the trade. Some of these are, perhaps, more freely noted from our “observatory” than elsewhere. Just a hint of two: Leading capitalists are becoming so impressed with the possibilities of the nursery business as a source of dividends that they are investing in it; trained selling experts from *other* fields are getting into *this* field.



Each of these things means something—in combination they mean a lot. The nursery business is on the threshold of a great development. All America is to be improved and planted within the next few decades to an even greater degree of completeness





than has been suburban Boston. (You will better understand just what this means after the next convention.) Nurserymen who do million-dollar-a-year businesses won't be hard to find much longer.



Are you in line for the big advance? If not, you'd better get in, or get out—of the trade. There will be no middle ground—the aggressive fellow will go ahead, the unprogressive one will go bad. You may not have the location nor the conditions which will enable you to grow as big as the Starks, or the Harrisons, but if you don't make the utmost of whatever opportunities are yours, the procession will move right on, and some other fellow will be in the front rank where you might have been.

Get busy! We can help you, guide your efforts, keep you out of the quicksands. That is, we can *if* you engage us before we are tied up in service for some more wide-awake man in *your* field. You'd better see us *first*. For a beginning, write us who you are, where you hold forth, what you have done, and what you would like to accomplish. In return we will send you some pretty interesting printed matter and write you freely our impressions of your opportunities, and our suggestions as to procedure. No obligations incurred in acting on this invitation—and everything confidential.

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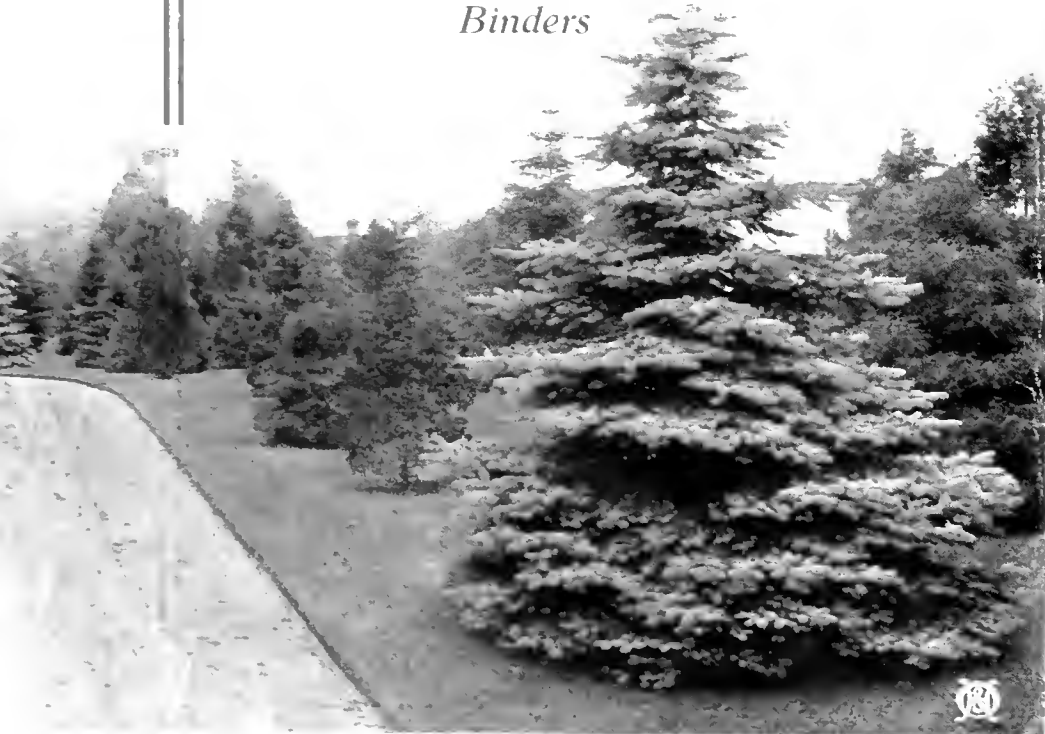
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The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XIX.

ROCHESTER, N. Y., AUGUST, 1911

No. 8

PEACHES AND PEACH CULTURE

Principles of Peach Orcharding Outlined. The Peach a Profitable Crop

The peach is an introduced fruit in this country. True it is that it came almost with the first colonists, and that in parts of the country where its home conditions are approximated, it is, to all intents and purposes, a native. The Spaniards undoubtedly brought this fruit to the Florida peninsula at a very early date, and it is just possible that the Indians carried it north to the Atlantic States, and introduced it in the peninsular region prior to the colonizing efforts of the New Englanders. Peach orchards are recorded as having been found in Pennsylvania at such an early date that they can hardly be credited to the colonists of the William Penn period.

However this all may be, the peach has spread its dominion throughout a great stretch of country, running as far north as the forty-first parallel of latitude, and as far south as the thirtieth parallel. Of course, this statement needs modification when we take into consideration the possibilities of peach growing in British Columbia, all of which lies north of the forty-eighth parallel of north latitude. But here the whole region is under the influence of the Japan current and maritime factors which modify the climate to a marked degree.

The native home of the peach is credited to Persia and China. The large number of our older varieties come from Persia, while some of our more important commercial kinds are of Chinese origin.

RACES OF PEACHES

It is possible to group peaches according to characteristics of fruit, twig and leaf. Pursuing a method of this kind, Mr. R. H. Price, in a special report of the American Pomological Society, describes five races of peaches. These are briefly as follows:

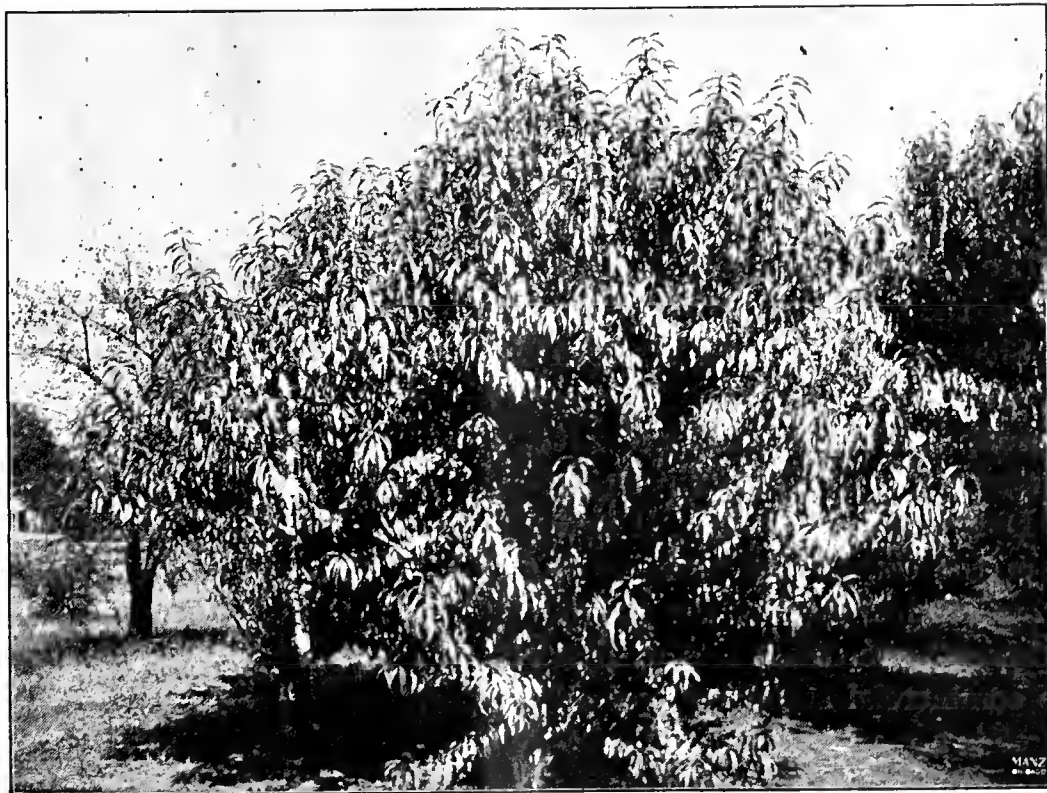
1. *Prunus Persica*, variety *platycarpa*, of the French po-

molologist DeCaisne. To this group belongs the Peen-to race, which was introduced by the late P. J. Berckmans of Augusta, Georgia, as far back as 1869. Mr. Berckmans secured it from Australia, but it is to be traced to China. This type bears peculiarly flattened fruit, with whitish skin, frequently mottled with carmine, white flesh, sweetish in flavor, but of rather peculiar taste. The Peen-to peach has little or no value except near the sea-coast, where other types are likely to fail. Among the seedlings of this strain which give promise are Angel and Waldo. Both have been grown to some extent in the Gulf region. This strain of peaches has been described in detail in Bulletin No. 62 of the Florida Experiment Station.

Race 2 has been called the South China strain. The winter buds of this type are very prominent. They are dark red and stand out strikingly from the twig. The leaves are small, somewhat trough-shaped, the blossoms are large and profuse, and are markedly resistant to cold. This strain was imported from China by the late eminent pomologist, Charles Downing, about 1850. It was introduced by P. J. Berckmans in 1858. The leading variety of the type is Honey. The name Honey has been applied because of its

peculiar honey-like flavor. The fruit is rather small, slightly oval, and somewhat flattened laterally. The striking character of the fruit is its long, recurved apex. Other varieties produced in this country are Pallos, Climax, Coleman, and Early China.

Race 3, Spanish. This represents a somewhat ill-defined group supposed to have been introduced by the early Spanish settlers. The tree attains large size. The leaves are small, flat, and cling to the tree late in the fall. The fruit ripens very late and is usually covered with a profuse coat of down. The color is yellow, and the quality is relatively low.



Showing the low headed tree

In some strains the flesh is streaked with red. In one variety this is almost a solid red.

This strain succeeds well up into the central states. The main point is that it requires a good deal of summer heat to mature the fruit. Among the cultivated varieties belonging to the group are Cobbler, Columbia, Lulu, Onderdonk, and Texas.

Race 4, North China. This group of peaches has been very completely written up by G. Harold Powell in Bulletin



Crimson Clover as a Cover Crop

54 of the Delaware Experiment Station. The characteristics of the group are briefly as follows: vigorous, round to broad heads, hardy, prolific, leaves large, flat, deep green, flowers large, fruit large, variable in color, flesh fine grained, juicy, either cling or free. The principal drawback is the susceptibility to rot of many of the varieties. This group originated in orchards around Shanghai, China, and has been known as the North China or Chinese Cling group. To say that Elberta belongs to this group will immediately bring it to the mind of all peach growers. The strain was brought into this country by Charles Downing about 1850. It now furnishes the major portion of the commercial varieties of peaches. Carman and Thurber are members of the group.

Race 5, Persian. This represents the oldest and earliest cultivated, at least from the commercial standpoint, of all the peaches we grow. The tree is a medium size. The foliage is nearly always crimped or crinkled, takes on a purplish tinge in the autumn. The fruit is highly colored, and of the highest quality. The buds are easily moved by warm weather, and therefore subject to frost injury. It has been the victim of yellows and rosette in the great peach districts of the Northeast. To this group belong Alexander, the Crawfords, Mountain Rose, Old Mixon, Garfield, St. John, and many other well known varieties.

COMMERCIAL ASPECTS OF PEACH ORCHARDING

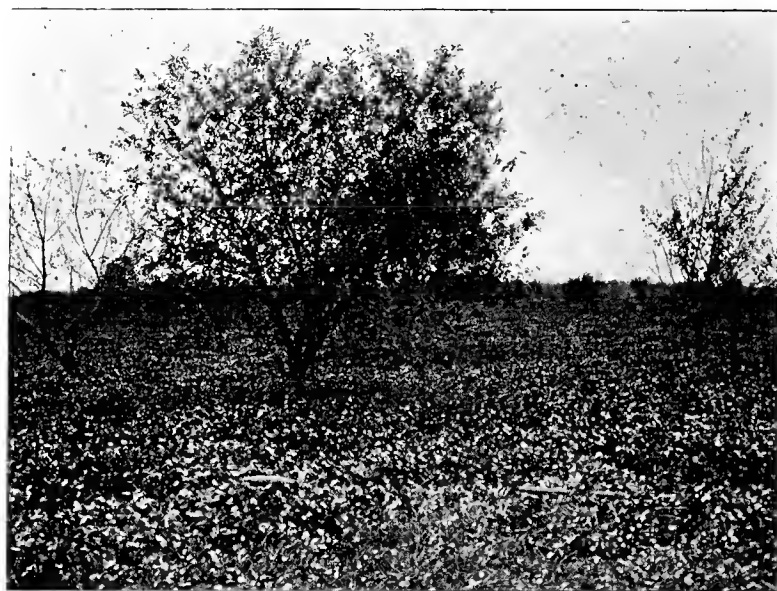
Time was when the privilege of growing peaches was accorded to only a few favored localities. Hardly any fruit in the whole range of orchard species has been more widely colonized in the past twenty-five years than the peach. Time was when Delaware and New Jersey were supposed to be almost the only places we should attempt peach culture in the eastern United States. These states performed an exceed-

ingly valuable office as a publicity bureau for the whole northeastern country when they were in their heyday as peach-producing regions. But since that day peach culture has spread east, west, north, and south, and particularly southward. From 1890 to 1900 only three states in the Union showed a decrease in peach planting. These were New Jersey, Delaware, and Maryland. In 1890 these three states had twenty-eight per cent of all the peach trees in the United States. In 1900 they had only nine per cent. This means that planting decreased in these states, but it also means that planting increased largely in other states.

The Gulf states from Alabama to the western boundary of Texas have developed great peach orchards. Success has not been uniform and continuous any more than it was not uniform and continuous in the upper peninsula region in early days. But this is not remarkable, when we consider the character of the fruit we are dealing with.

ORCHARD MANAGEMENT

The necessity for good air drainage is probably emphasized with more force in the case of the peach than any other fruit. Lack of air drainage invites late and early frosts. Pockets where the cold air has a tendency to settle present these unfavorable conditions. Curious enough, although this is a distinctly warm-blooded fruit, the majority of peach growers vote in favor of a northern exposure. In New England and New York, locations adjacent to bodies of water are most favorable. Probably the safest peach region in the whole country is that lying along the south shore of Lake Ontario. In our personal recollection, fewer failures have occurred in this region than any other region of similar size in the United States. We refer to failures due to climatic vagaries. It is well known that interior regions are notably more frosty than coast climates.



Mammoth Clover as a Cover Crop

PEACH SOIL

Good peaches are grown on soils grading from drifting sand to stiff, sandy loam, and even on clay loam, if well drained. The important influences of the soil bear particularly upon the ripening of the wood. The soil which will tend to ripen wood thoroughly in the autumn is by all odds the most desirable. Probably the ideal peach soil is a gravelly or light, sandy soil with porous subsoil, warm and well drained.

DISTANCE TO SET TREES

In the North and East, opinions and practices vary, and trees are set from sixteen to twenty feet apart. Probably the latter distance is best where strong soil and good management obtain. In the South, throughout Georgia, Alabama, Tennessee, twelve to fourteen feet is not an unusual distance.

KIND OF TREES

The tendency has constantly been toward the using of younger trees than formerly. A one-year old tree from the bud is better than an older tree. The commonest practice now is to head from one to two feet high. Following this comes the shaping of the top, and there are two general forms from which to choose. One is the vase form or open-centered tree, and the other the globe or close-centered tree.

In the first, Hedrick says, "the framework of the tree consists of a short trunk surmounted with four or five main branches, ascending obliquely. In the second, the trunk is continued above the branches, forming the center of the tree, and later being headed in, a globe-like trunk is formed." In the Ontario Lake region, the vase-formed is the favorite. Some growers err on the side of pruning too heavily. Excessive pruning in winter simply stimulates wood growth,

and produces too much vegetative vigor. The shortening back of the main branches from one-third to one-half the second and third seasons will probably be as much pruning as is necessary. After the trees come into bearing, much less heading back is required. It often occurs, however, that when the trees attain the age of eight or ten years, that a severe cutting back may be necessary, in order to lower the head and bring down the fruiting area.

FERTILIZERS AND TILLAGE

The prime requisite of the peach is moisture. This is needed to promote growth and swell the fruit. In fact, from eighty to ninety per cent of the fruit crop is water. Therefore, the important thing is to conserve moisture during the growing period. If the soil is in reasonably good heart, it is not likely that much nitrogen will be needed until the trees come into bearing. Undoubtedly as much nitrogen as will be required can be secured from a cover crop of some leguminous crop. When the trees come into bearing, it should be remembered that they make a considerable draft

upon the soil, and the fertilizer requirements are much heavier.

FERTILIZING PEACHES AND PLUMS

A standard fertilizer containing say two per cent of ammonia and eight to ten per cent each of phosphoric acid and potash, may be employed on peaches and plums during the vegetative or wood-making period, that is, during the first two or three seasons. Ground bone, acid phosphate, and muriate of potash may be employed to furnish the mineral requirements. The second season it will probably be desirable to use nitrate of soda in addition to this formula at the rate of 125 to 150 pounds per acre, which would mean something like a pound per tree.

If the ground is intercropped, the amount of the basic fertilizer should be very materially increased, and when the

trees come into bearing, the basic fertilizer can be brought up to seven or eight hundred pounds per acre, and the amount of nitrate of soda to three hundred pounds per acre. This is on the assumption that the trees are bearing reasonable crops of fruit.

CULTIVATION

In the matter of cultivation, the general opinion and agreement is that the peach orchard must not be neglected. This is largely due to the fact, previously noted, that the peach re-

quires large amounts of water. More peach orchards have been destroyed by sod and "sod yellows" than by yellows itself; for with sod comes many other troubles, such as borers, which shorten the life of the tree. Plow, cultivate, cover crop; this is the gospel of peach tillage.

THINNING THE FRUIT

Of all the fruits upon which thinning has been practiced, the peach has given the largest and most satisfactory results. No up-to-date peach grower will attempt to develop a satisfactory crop of peaches without thinning, and this thinning should reduce the peaches so that they will stand not closer on the branches than four or five inches apart, and the work should be done immediately after the June drop is over. Thinning before that time may be waste time. Thinning after that time is allowing the tree to waste its energy.

VARIETIES OF PEACHES

There is no one variety which some varieties which approxi-



A peach pruned in vase form

peach, Elberta is the most cosmopolitan of all varieties. If one is thinking of setting an orchard, he should study the climatic and soil conditions of his site, he should attempt to find out what varieties are succeeding best in that region, he should attempt to discover the demands of his market; and then he should address himself to the task of producing the finest product of the varieties he has selected. If one were looking for the five varieties of peaches most hardy in wood, Hedrick recommends Crosby, Hill's Chili, Stevens' Rareripe, Gold Drop, and Elberta. The five varieties most hardy in bud are Crosby, Hill's Chili, Triumph, Gold Drop, and Stevens' Rareripe. The five most tender in bud are Early and Late Crawford, Chair's Choice, Reeves' Favorite, and Elberta. Nevertheless, in the last list we find the varieties which compose a major portion of the great commercial plantings of the country. Of course, in the Gulf States, certain local varieties are recognized. The variety question is largely a local problem and must be settled on the spot.

ENEMIES

The peach is not without its enemies. Leaf curl, yellows, little peach, borers, scale, brown rot, all take their toll in measures of trees or fruits or both. But each year is bringing the fruit grower more confidence, because he is gaining more knowledge, and we recognize the truth of the old saw that "knowledge is power."

Leaf curl is no longer viewed with trepidation by the peach grower. He sprays before the buds begin growth with Bordeaux, or lime sulphur. Brown rot in some parts of the country is and always will be a serious enemy, on account of its ready response to climatic conditions. Given humidity and high temperature, and we have favorable conditions for the development of this enemy, but the experiments of recent years with the self-boiled lime sulphur have brought renewed confidence to peach growers, and renewed assurance that in average of seasons this enemy, like peach curl, may be killed.

Yellows and little peach, we still have types of undetermined usually to physiological disturbances. In the absence of knowing, however, that good cultivation means the extermination of the enemy, the grower, completely, will eradicate the

In the borer and San José scale, we have two enemies which are now established, and will undoubtedly always be found in greater or less numbers, and with greater or less virulence, in peach-growing sections. They are part of the peach grower's burden, and he can only obtain relief from it by continual warfare. The lime sulphur is at present the recipe against San José scale. The pruning knife, directed by a vigilant eye, is the main reliance against borer.

Peach orcharding will more and more, as time goes on, drift to those regions where conditions are most favorable, and per contra, where enemies are least abundant.

HARVESTING AND MARKETING

This is the side which taxes the business ability of the grower. It is the department where frequent failure occurs. Growers are wont to charge their shortcomings to the commission man or the agent. Sometimes the agent and commission man are at fault, sometimes the grower, and sometimes both. Successful marketing is an art which is acquired slowly, and it is a good thing if the grower can gradually develop a system. With a good system, a large crop can be handled with less friction and loss than a small one.

The refrigerator car and the ice house with the cooling house are now requisites where the grower is situated at any

considerable distance from his markets. Even the large peach growers of Connecticut and Delaware are equipped with their own ice houses, from which they can ice refrigerator cars when necessary.

The fruit is carried direct from the orchard to the packing house, where it is repacked and either cooled in a cooling room, or if the haul is short, packed directly into the cars. If the market is within twelve or fifteen hours of the orchard, the latter method is usually satisfactory.

The kind of package used is to be decided by the grower in connection with the market to which he caters. Sixteen-quart baskets are popular in New England, while in the South and on the Pacific Coast the six-crate carrier has the preference. The grower cannot afford to use less than two grades in sorting his fruit. As a rule, the attractive package has much to do with the ready disposal of the fruit. The package, the grade, and the variety are the three important factors.



A dehorned Peach Tree. First season's growth

PROBLEMS IN COMMERCIAL PECAN ORCHARDING

By JOHN CRAIG

Before Georgia-Florida Pecan Growers

Allow me to congratulate the members of the Georgia-Florida Pecan Growers' Association on the organization of this sectional society. I am sure that it is needed, and I am certain that it will act as a strong stimulation and co-operative agent in promoting pecan culture. We are especially in need of co-operative influences in this day and age, and I am sure that your society will vastly more than justify its existence in furthering a sane and conservative propagandist movement making for pecan orchard development. We represent the vanguard of a great and important movement. Pecan culture cannot be regarded as a demonstrated commercial industry. We are and shall be for some years in the experimental phases of pecan orcharding. It is accurate to say that we are better supplied with faith than experience, but if, using an Americanism, we stay with the game, the latter, experience, will come just as surely as old age and the tax collector. Again, experience is gathered rapidly or slowly, in proportion as we cooperate and compare notes. We, or rather you, are taking the shortest cut towards the experience goal. Let us all aid in adding to the sum of our knowledge in this subject in which we are so keenly interested.

SOME OF THE PROBLEMS

Possibly the following may not be regarded as problems by the older and more experienced pecan propagators and orchardists, but from my standpoint they loom up as very live questions, not all, of course, of equal importance.

1. Which are the best stocks, western, northern, or southern? An answer to the question can hardly be given off-hand, because it can only be solved in the light of actual experience, and of experience which will cover more than a single season. The culture of pomes and drupes is very much older than that of nuts, but the question is still a live one in the case of the apple, for instance, where opinions among propagators differ radically as to the merits of French and American grown stocks. In the absence of exact data, I am disposed to regard that affinities which are developed through the action of similar environmental conditions should be the safest guide until we know better. Translating this, I would say that Texas stocks for Texas scions are probably better than Florida or more northerly grown stocks, and vice versa. I hope that this suggestion will provoke some discussion, and give rise to the citation of direct experiences on this point.

2. How should a strong two-year root graft be pruned at planting? We will suppose that it is five to six feet. Is it best to cut it back to three feet, or should we let it go, supposing, of course, that it has been carefully dug? My own opinion is that the less pruning we do the better. Adventitious buds do not develop readily from the older wood, and I am inclined to think we can cut back a young tree more severely than it will be safe to cut back an older tree at transplanting. Of course, the case is quite different when the two trees are established.

3. How high should we head, or how low should we head? Years ago, in apple growing, the high head was the rule. Few people thought of heading below four and one-half feet

in the East, at least; but the Middle West and the Northwest has shown us the advantage of the low head, and the orcharding custom of the Northeast is falling into line. There is no doubt that the head is sure to go up. In this respect, the pecan differs from man, whose head usually comes down with advancing years; and further, the lower branches and older branches are the ones which naturally give us first fruit. My recommendation is to save these by pruning lightly. On the matter of height of head, I would err on the low side rather than the high. It is much easier to raise the head than to lower it.

4. Fertilizing. Here comes the main rub. How much to push the tree by the use of nitrogenous fertilizers; how much to depend on the leguminous crop for this nitrogen; what is the role of potash and phosphoric acid in the early life period of

the tree; what is its importance in the latter and fruit-bearing age; these and many other questions all need investigation and answer. Through cooperation we can arrive at answers very much more quickly than is possible by individual study.

I believe in the general principle of attempting to secure nitrogen from leguminous crops. Not only do we obtain nitrogen itself in this way, but the physical makeup of the soil is vastly improved and its productivity largely increased. The fertilizer bills are exceedingly important ones. They grow more rapidly than the trees, and it behooves us to consider these causes of expenditure with the most careful criticism.

5. Enemies. Thus far the pecan grower is in a reasonably comfortable state and condition in reference to the enemies which attack his crops. The arch-enemies of the peach, the



Heading back old Peach Trees

pear, and the standard orchard crops, San José scale and bacterial blight, pass him by. But we need not expect to remain in this semi-paradise condition. We can be certain that as pecan areas increase the parasites of the tree will also respond to the improved opportunities for propagation and growth. We should, in my judgment, stand together on the principle of fighting insects and diseases. Nearly all the important enemies, especially insect enemies, of our orchard crops could have been exterminated or at least controlled, had they been taken in time. Parenthetically, I may add that a good many of them were imported. We were not satisfied with our own stock of these pests, so we laid tribute on

the pestiferous hosts of foreign countries, and planted them in our own orchards. But to resume the thread of my discussion in this connection, I would say that no pecan orchard should be abandoned and allowed to become a pest hole or a propagating center for the fungous and insect parasites of this crop. This association should see to it that such legislative enactments are provided as will enable the proper authorities to condemn and destroy any orchard which is simply acting as a propagating center for disease or insect parasites. Such trees should be cut down and burned under direction of state authorities.

THE NURSERY INTERESTS OF MISSOURI

J. G. Whitten, Professor of Horticulture, University of Missouri

In considering the nursery interests of Missouri, it seems first desirable to state certain conditions which favor or oppose the growth and development of the industry. The development of any human activity depends so largely upon natural conditions and environment that it cannot be properly considered apart from these. Natural conditions in Missouri have favored the development of the nursery interests.

Our first consideration is the climate. The state occupies a central position between north and south and between east and west. This admits of the growing of the large range of species and varieties of fruit trees and ornamental plants. This fact is indicated by our natural flora, which embraces northern, southern, eastern, and western species of plants. In fact, the overlapping in Missouri of representative species of the extreme parts of the country is perhaps even remarkable. Our flora embraces plants of the Rocky Mountain region, to some degree, as well as those of the Atlantic slope. Hardy northern species often reach as far south as Missouri, while many species of the Gulf States find their northern range in this state. With this natural flora also are embraced a rich flora in our native fruits, such as crab apples, plums, cherries, berries, and very emphatically our native grapes.

FRUITS NATIVE TO MISSOURI

Our *Vitis riparia*, or river bank grape, which is the hardiest and most northern species of the American grapes, grows side by side in the same woodland with the *Vitis Aestivalis*, or summer grape, of the central states and Southwest. The still more southwest *Lincecumii*, or southwestern summer grape, also reaches splendid development in the Ozark Mountain region. Even the *Vitis rotundifolia*, or southern grape, of which the Scuppernon is the leading cultivated representative, grows wild adjacent to the swamp region in southeastern Missouri.

The prairie states crab of the far northwest is found here along with the more southern pawpaw and persimmon. The Souland crab, now recognized as a hybrid between the wild crab and the common apple, first came to notice in this state where it grows and fruits abundantly.

The *Prunus Americana*, or the northern native wild plum, overlaps in this section with the southern Chickasaw type. These two have hybridized somewhat abundantly in nature, giving rise to the hybrid type of plums known as *Prunus hortulana*.

Added to these are blackberries, dewberries, and raspberries, some of which have already been brought into cultivation from the wild. The black wild cherries and choke cherries also reach splendid development, and the ornamental shrubs and trees found native in Missouri are too numerous to mention here.

This varied and abundant natural fruit flora shows conclusively that the soil and climatic conditions favor the growth of kindred species in the nursery. Among our best nursery soils should be mentioned the loess soil which comprises large areas along the Mississippi and Missouri Rivers. Throughout the State this deep, rich, mellow, well drained soil is among the most favorable for general nursery work. Some of our high, deep, black, sandy river bottom soils are also unexcelled as nursery lands. Some of the richest soils of the Ozark region such, for instance, as those in Lawrence county, are also favorable for the nursery business. Some of the nurseries of the State also thrive well on the rich, deep, mellow prairie soils of the western part of the State.

DEVELOPMENT OF NURSERY BUSINESS

The history of the development of the nursery business in Missouri has been an interesting one. Recorded data concerning its development exists largely in the reports of the Missouri State Horticultural Society, which cover something more than the last fifty years, and in the files of our older agricultural journals, such as *Colman's Rural World*. Many of these interesting facts have been compiled by Professor C. H. Dutcher of Warrensburg, Missouri, and appear in the Proceedings of the American Pomological Society for 1905, page 90. In addition, some of the older nurserymen now living are able to contribute facts concerning the pioneer work. Quoting from Professor Dutcher: "There is legendary and mythological evidence that there were two nurseries in Missouri in the year 1800. In 1850, we had some thirty-two, and in 1895, more than four hundred." Of course, the

first orchards of the state were largely grown from seeds brought in by the early settlers from the East, or disseminated from the early trees to come into bearing. Soon, however, small nurseries began to be established. According to Professor Dutcher, Col. Geo. S. Park established a nursery at Parkville, Missouri, in the early forties. This was the pioneer nursery for Western Missouri and Kansas. A Mr. Mock established a nursery in Johnson County about 1850. These two were probably the oldest nurseries in the central or western counties. In 1825, Judge James Stark emigrated from Bourbon County, Kentucky, to Pike County, Missouri, where at Louisiana he started the famous nursery that for eighty-five years has lived and grown under the management of sons, grandsons, and great-grandsons until today it is the largest nursery in the world. Other men whose names have been prominently linked with the pioneer nursery work in Missouri, or with the origin and dissemination of valuable varieties, are: Jacob Rommel, Geo. Husman, Herman Jaeger, J. C. Evans, S. Butterfield, L. A. Goodman, Judge Samuel Miller, Messrs. Monsees, Blair and Kaufmann.

A notable list of commercial varieties of fruits also have been originated and disseminated from this state by Missouri nurserymen. Among the apples which should be mentioned in this connection are the Huntsman, Lawver, Gano, Ingram, Paine's Keeper, Nixonite, Missouri Pippin, White Winter Pippin, King David, Delicious, and many others now coming into prominence.

Among our well-known varieties of grapes produced by such men as Judge Miller, Herman Jaeger, Jacob Rommel, and others, are the Martha, Elvira, Missouri Riesling, Neosho, Black Eagle, and a host of others. Many of the cultivated grapes of the Aestivalis and Lincecumi types originated in Missouri, have also formed the foundation stock from which many varieties have originated by progressive growers in other states. Many of the men mentioned above, as well as others breeding fruits today, have originated scores of varieties of berries, plums, and other fruits more or less grown. To Col. Evans belongs the honor of having produced the Miller persimmon which, in the writer's judgment, marks an epoch in the amelioration of this promising and reliable native fruit.

NOTABLE NURSERYMEN

While the early nurseries grew a general stock, most of them small and their influence largely local, the present day finds many of our nurseries assuming large proportions and developing a trade not only country wide, but world wide. Stark Bros. Nurseries and Orchards Company of Louisiana, Missouri, possess a plant which alone would give Missouri a prominent place in the nursery business. While they grow enormous quantities of fruit trees and of ornamentals locally, they are also producing special lines of stock in widely separated soils and locations throughout the country. Weber Bros., Nursery P. O., St. Louis, Missouri, produce a large stock of both fruit trees and ornamentals. The New Haven Nursery at New Haven, Missouri, is one of the old and well-known nurseries of the state. Wild Bros., Sarcoxie, Missouri, whose business has been handed down from father to sons, deal in both fruit trees and ornamentals, specializing partic-

ularly with peonies. The Lee's Summit Star Nursery, established by Mr. Butterfield, and now conducted by his son, produces large ornamental trees and shrubs. The Kelsey Nursery of St. Joseph, Schulte of South St. Louis, and the Jackson Co. Nursery of Lee's Summit, also produce heavily of various lines of nursery stock.

A few growers specialize largely in a single line, such as the Hermann Grape Nursery at Hermann, Missouri, and the McNally Fruit and Plant Company of Sarcoxie, who grow principally strawberry plants.

The growth in number of our nurseries in recent years is less notable than the development of the magnitude of the interest of each and also the development of special lines of trade. While some of our largest nurseries still produce a general stock, it may be said that the nursery generally is more and more specializing in certain lines of production. Furthermore, the nurseries which are most rapidly developing strength are locating their work on soils or under conditions best adapted to growing a given species or plant. This movement towards specialization in handling and towards specialization in adapting a species to soil conditions is being responsible for organizing very extensive special interests. This is exemplified by the fact that the production of seedling stock, for example, is now largely confined to such districts as the Kaw River valley in eastern Kansas and the Chariton River valley.

With present facilities for transportation, modern methods of packing, storing, and refrigeration, the nurseryman seems to be carrying out the same idea as the fruit producer who finds it most profitable to produce a given species in that soil and climate which will best produce it.

District No. 8. Illinois north of the 500-foot contour line as it crosses the State between 38° and 39° latitude; a very small portion of southwest Wisconsin; Iowa south of about latitude 42°30'; the Missouri River Valley portion of southeastern South Dakota; Nebraska and Kansas below 2,000 feet elevation; and Missouri north of a line drawn from near St. Louis and along the elevation of 1,000 feet to the southeast corner of Kansas. The Missouri and Mississippi Valley sections of the district are its dominant features. The hardy deciduous fruits succeed in most portions, and commercial fruit growing is a rapidly developing industry.

District No. 9. Wisconsin except the small southwest corner; Minnesota; upper Michigan; Iowa north of about latitude 42°30'; North and South Dakota east of longitude 99°; and Canada west of longitude 80° and east of longitude 99°. This district embraces the upper lakes, including Winnipeg, the upper Mississippi and the Red River valleys. Only the hardier fruits succeed, but fair progress has been made in recent years in developing varieties adapted to this region.

District No. 10. Nebraska, Kansas, and Oklahoma above 2,000 feet, and Colorado below 5,000 feet elevation; also Texas above 1,000 feet and east of longitude 103° and the Pecos River. This is the central plain and foothill district. It lies on the eastern slope of the Continental Divide. There are small sections, especially in western Colorado and farther southward, where the apple and other hardy fruits are successfully grown.

EDITORIAL WANDERINGS

Fruit Growing in the Hood River Valley

The apple is the fruit which has made Hood River famous and incidentally has advertised Oregon and Washington as fruit producing regions. But the apple is not the only fruit grown in the valley. Others are coming in. Some may be said to have arrived. This is the condition with the strawberry. It has become thoroughly established as one of the staple crops of the valley second only in importance to the apple. A visit to Hood River under the happy leadership of one of the fathers of the valley Mr. E. L. Smith, gave the writer new side lights on the fundamentals of successful fruit growing in this section. In the first place there are "no knockers." Optimism is present everywhere. All are interested in the general welfare of the industry. All work unitedly to promote it. Whether this is carried to an extreme point may be regarded as an open question. It is rather difficult to say just where true optimism leaves off and where purely "boosting" methods begin. The spirit is right, anyhow. We need much more of this attitude in the East. The visitor to the town, or rather village, of Hood River is courteously received by a representative of the Commercial club, who will probably arrange to drive him around the valley which he can cover in twelve or thirteen miles or find a well-informed substitute. One is astonished at the amount of minute details these men carry regarding the history of each place. They have the original selling price of the raw land, the cost of breaking or clearing, the cost of supplying it with water, together with the rapid increases in price as it moved from hand to hand. The visitor irresistibly begins to think much of real estate transactions and comparatively little of orcharding until he is brought back to fruitgrowing by the prodigious crop from an acre of strawberries, Newtowns or Winesaps. Many men, perhaps most men, engage in the business with an eye to speculation. They "improve" a piece of land, that is, plant and water a tract and then put it on the market. Of course home making is progressing, too, but the majority of the orchard owners live in town and handle the orchard at arms' length. We saw, however, attractive homes established and others in the making at various places in the valley. One does not feel quite the same spirit as that which prevails in the fruit sections of New York State. In Hood River and the west generally, nearly every farm or orchard tract can be bought if the buyer is disposed to bid high enough. In another word, the owner has his price. The idea of permanent home making is not in the air.

The farm of the orchard is out of all proportion to the age of the region as a producer of fruit. The oldest trees are under twenty years and the great mass of plantings under ten. The easterner must admit that the trees bear early. Even such tardy bearers as Spy and Newtown "get into the game" using a western phrase in six or seven years. This is conceded. May it not be also presumed that precocity and prolificacy will be associated with relatively short life. However, this is not a serious matter provided the trees bear heavily during their life period.

Hood River growers can give many useful points to Eastern growers—this notwithstanding the real estate reflections already mentioned. They are intensive culturists. They expend more money for instance in winter and summer pruning their apples than our growers dream of doing. Apples are thinned when necessary as regularly and vigorously as peaches. Tillage is of the most thorough and exemplary kind. Nearly every well regulated orchard is equipped with water for irrigating when this is deemed necessary. In strawberry culture it is absolutely essential to success.

Finally, Hood River growers have given fruit producers the country over, a magnificent object lesson on the possibilities of grading accurately and packing attractively. With fruit which will run ninety per cent or over first class the difficulties of grading are certainly enormously reduced and may we not add that the strain on the conscience of the packer is at the same time very much lessened. Success to our brethren of the West!

Correspondence

THE DEPARTMENT STORE AND THE NURSERYMAN.

Editor NATIONAL NURSERYMAN:

While we are not old subscribers to your paper, I wish to submit a matter for your consideration which I think is of interest to nurserymen all over our country. As I have just said, I have not been a reader of your columns until quite recently, so that the subject about which I write may have appeared in your columns heretofore, but if such is the case I have no way of ascertaining it here. What I have reference to is the sale of Holland grown nursery products by our large department stores. In my home city, Pittsburg, three or four such stores have been handling these goods every Spring for the past three or four years. It seems to me that your paper, devoted as it is to the interests of the nursery trade, could very aptly take up a campaign to put a stop to this practice and the sooner it is stopped the better it will be not only for our home nurseries and the Holland growers but also for the public at large, as I shall endeavor to set forth.

In the first place, the stock these stores carry is of a very inferior grade and is, as several Holland growers have advised me, the "leavings" from some of the Holland nurseries after the wants of the regular nursery trade have cleaned up all their salable goods. This accounts for the stores being able to advertise Roses at 10c, Azaleas at 30c, Rhododendrons at 50c, and so on throughout the list. When the plants arrive at the store the cases are opened and sometimes the plants are wrapped in a little damp moss taken from the case, but usually a piece of paper is wrapped about the roots and after being dampened the plants are placed upon the counter for sale. Owing to the fact that any further watering after they are placed on the shelves is liable to do serious

damage to other goods in their neighborhood, the plants receive no more water until the purchaser takes them home and plants them. What is the result? The plant dries out, it would be impossible for it to grow, and the purchaser after nursing the thing along until well into the summer becomes disgusted and roots the plant out of his garden. He is both disgusted and discouraged but he fails to take into consideration the fact that he purchased the poorest stock he could get in the worst possible condition. Next year the chances are he will plant geraniums or some other tender pot grown flowers, if he plants anything at all.

There is still another phase to the question which works injury to the nursery business and that is the fact that the purchaser in most instances does not know what he is purchasing and the sales girls are never able to tell him. He knows he is buying a rose because the bush is sold as a rose, looks like a rose bush and has thorns upon it but whether it is a red one, a white one, or what variety, he does not know, so that he is entirely ignorant on many points the knowledge of all of which goes so far to lend charm and create pleasure in plant growing. I have said nothing about the direct harm these sales do the regular trade. By that I mean the harm done by their being deprived of the business these stores are doing. I really believe, from what I have seen and heard, that the discouragement the purchasers of this stock meet with is probably more costly in the long run to the regular nurserymen than the business of which he is deprived.

As a further illustration of this I would cite an instance which occurred here in Pittsburg this spring. One of our department stores in their mad rush to gain notoriety and advertising, published in their advertising that they would on a certain date, Arbor Day, I believe, give to the school children of our city 200,000 Catalpa trees and then they had the papers publish articles upon the wonderful Catalpa tree (*Catalpa Speciosa*) which this firm would so generously present to any child calling for one at the store in company with a parent. For a few weeks thereafter Catalpas ranging from two to three feet in height, nothing more nor less than whips, could be found planted between the curb and the sidewalks over our city. Today there are none to be found anywhere. The garbage man has them, but are not the children who planted them a little discouraged?

But to come to the point. It seems to me that the sale of these Holland grown goods by the stores could be stopped either by circulating a petition of protest among the nurserymen and giving the Holland grower to understand that the American nurserymen desired it stopped or by inducing the American nurserymen to boycott any Holland firm selling to a department store. In my dealings with a number of Holland traveling men this spring I would ask them if their house sold this or that department store and invariably they would proceed to advise me that their firm never sold to any such store, showing thereby that they recognize the damage such stores are doing and the injustice such nurserymen are doing the regular trade by dealing with the stores. In fact, the manner of these Dutchmen when spoken to on the subject is the only thing I have encountered which leads me to believe that this very subject may have been threshed out in your columns heretofore.

Probably the mere publication of a few letters such as this might have the effect of making the fellows on the other side "sit up and take notice." If you think so, publish it, and I sincerely hope other persons in the trade will supply you with more data later, as I am a new man in the business and there may be a lot more adverse points about the practice with which I am not yet familiar.

R. H. SMITH,

Care Pittsburg Nursery Company.

MAKE IT 1,000 AT BOSTON MEETING.

Editor NATIONAL NURSERYMAN:

Now that the nurserymen were unanimous in going to Boston for June, 1912, it is the duty of every nurseryman of the east Mississippi River to go to that convention and show to the nurserymen of the West, we are in earnest when we ask them to come East. With the cooperation of our secretary, John Hall, let's set the pace for 1,000 at our next meeting at Boston. We can get them if we start after them today. Mr. Hall will do his best, will you do yours?

There are few men in the nurserymen's fraternity who have a warmer interest in the success of the Boston meeting than W. H. Wyman. He will start work at once and will move things and show you that Boston is substantially alive. Our congenial friend, J. H. Hale, will be heard from. Mr. Robinson of the New England Nurseries and hundreds of other new men we have not met will be on the spot. Every nurseryman should take his family with him.

Boston business men are live wires when you touch them on anything pertaining to growing fruit or beautifying the home or the country and you will be met with welcoming hands by the hustling business men in all of the East.

ORLANDO HARRISON.

TOP WORKING KIEFFER.

Editor NATIONAL NURSERYMAN:

I have read with much interest your editorial in the June issue on top working the Kieffer pear. About twenty-five years ago my father set 100 Kieffers on his farm at Ghent, Columbia Co., N. Y. The particular location was not at all suitable for this variety, producing small fruit that never seemed to ripen. After a few years, two-thirds of the trees were top worked to Anjou and the balance to Bosc.

The results were very satisfactory in every way. A good union between stock and scion was secured with both varieties. The trees made a good growth and have not been subject to blight or other diseases any more than trees propagated in the usual way. They have given abundant crops, and now after nearly twenty years there are only a few of the Bosc trees that have failed and practically none of the Anjous.

Very truly yours,

EDWIN C. POWELL.

THE NATIONAL NURSERYMEN Publishing Company:

Enclosed find check for \$1.00 for NATIONAL NURSERYMEN. We were unable to attend the convention this year, but enjoyed the report through the N. Nurserymen.

Yours respectfully,

W. T. GOUGH, Kans.

THE ETHICS OF OUR BUSINESS

Harlan P. Kelsey, Salem, Mass.

It is significant as well as hopeful that anyone should have been asked to prepare a paper on the ethics of a business to be presented at the annual convention of the leading men engaged in that particular business.

The question of ethics in the professions is an old one, and doctors, dentists, lawyers, architects, engineers, and even landscape architects have adopted ethical codes, which, when disregarded or ignored, tend to place the delinquent in an unenviable light with his fellow members, if not actually making him amenable to more or less drastic disciplining.

Curiously enough, however, the subject of ethics in business, and particularly so-called "big business," has been persistently tabooed and even vigorously throttled until quite recently, and prevailing practices have been all too quietly accepted by the business man while financial success has been the one great test of a business man's right to general community esteem.

Even now, in the face of judicial exposure, of vast frauds and systems of frauds involving our largest corporate interests and our wealthiest and hitherto most respected citizens, he who questions every-day business methods is usually termed a muck-raker, if not socialist and anarchist.

Assuming that the dollar-getting methods of the average citizen are often unfair, when closely analyzed, and even dishonorable, and that the scramble for position and preferment leads to questionable practices to attain desired, though oft-times undesirable, ends,—this might truly give us reason to ponder carefully on the causes and possible remedies.

Yet, is it not a still graver problem when we consider how hushed is the voice of the teacher and the preacher on fundamental questions of every-day business ethics, which in the definition we are here disposed to discuss, means every-day business honesty and dishonesty.

Down the ages, the preacher has thundered against immorality, while his voice seems forever strangely still about the immorality of his leading church members, even deacons, who supply his salary and build and support churches out of wealth acquired by dodging taxes, stock gambling, stealing public utilities or even petty stealing of sidewalk space that belongs to the humble meek and non-complaining "common" citizen at large.

From the beginning our teachers have taught classics, art, literature, law, science, and even religion, etiquette and so-called ethics ad nauseam, while at the same time, they have given Young America precious little schooling in fundamental business honor, or ethical business methods. They have received a more or less efficient training to go out in the world in various directions and shift for themselves, which they promptly proceed to do, by "playing the game," as their fathers have played and are playing it, which means, to arrive with the goods,—straight if you can,—but above all else, *arrive*.

And it's a silly fool who doesn't early learn that this is just what is generally expected of him by those who taught him, and by those who paid for his teaching, and desire their own so-called "successful" footsteps followed.

And so we witness the merchant with his unfair competitive methods and shoddy, falsely-advertised goods, the importer evading duty, the builder and contractor bidding below cost, and relying on evading contract for his profit, the patent medicine fakir dealing out poison, the sweat-shops and child labor murderer, the manufacturer breeding tuberculosis in dusty, ill-ventilated shops, the crowded tenement-house owner, whose profits are too often the price of crime, misery, and disease, the lawyer becoming the vote-buying politician, and so through the long list we all know so well, and admit of so little, to the nurseryman, who endeavors to increase his sales by unfair methods; by giving the bribe or graft to the gardener, superintendent of estate, or public official; by stealing information the property of others, or by claiming what is, is not and what is not, is.

The gardener or other employee is hired to represent his employer's interest, and no sane man will argue that he is free to do so, or liable to do so after having accepted a bribe or the promise of a bribe or gratuity. There can be no distinction in its moral or ethical aspects, between the case just cited, and the legislator or public official, theoretically serving the people, yet riding on a free pass or accepting a retainer from the railroad or other public service corporation whose selfish interests are rarely in accord with the best public welfare.

It is bribery, pure and simple, and a conspiracy to defraud, and the most charitably inclined can hardly make the indictment less specific or comprehensive. In Massachusetts, the giving of a gratuity to a servant, or agent, with a view to influencing business with the principal, is a felony under the law, and I believe it is not the same in Pennsylvania, New York, and possibly other states. Yet, from its very nature, such bribery is the most difficult kind to prove when both briber and bribed are equally guilty, while the unlawful practice is universally conceded to be as common as business itself.

The results of this bribing of employees cannot be other than a blunting of the sensibilities in other directions. I know of cases where the employers themselves wink at the practice, allowing themselves to be robbed, if within decent limits, feeling it hopeless to fight against a system so thoroughly entrenched, and which they practice themselves.

One can scarcely blame the underpaid gardener for increasing his meagre income by accepting the small graft when all concerned know that the employer is possibly or probably an employer only as a result of larger and more successful graft, bribery, or other dishonest business methods.

Time bids me close, and I have specifically touched on but one phase of ethics in our business. Misleading advertising, exaggerated and incorrect description of goods, speaking

unfairly of our competitors, the nursery-agent's oft-times too enthusiastic tables and statements of yield, size, color and fragrance, the utterly inexcusable practice of supplying two or more rare and high priced varieties out of one common cheap variety, our honest packing and grading relations to our employees, and other ethical questions must be left for later discussion, important as they really are.

If I have partially diagnosed the case, it should be cause for optimism, for a disease once recognized and admitted will be surely combatted.

Perhaps right ethics in our business, or in business generally will never be universally practiced until cooperation in business takes the place of competition, or perhaps until our economic system is radically changed in many other respects.

Yet actual bribery in the form of gifts and favors to employees of customers can and should be done away with, and the National Nurserymen's Association might very well declare itself at this time, in no uncertain voice. Let the power of public opinion at least act on those who practice this form of dishonesty and law-breaking. Even if actual convictions can not be had as quickly as some of us hope for.

It is necessary yet not sufficient for individuals to be personally clean in business practice, for each citizen has public duties to perform and public service to render, if nothing more than standing back of those who are striving for more just, more equitable economic conditions, an actually applied code of ethics among public officials and in private business life. Tainted dollars will probably continue to be equal in buying value to clean dollars, yet we recently have most abundant proof that American conscience is so aroused that the dollar mark as indicative of our national life and character will sooner or later be replaced by a coat of arms representing square deal, social service, and cooperative effort.

Naturally, it is the easier and more profitable course to "play the game" according to current rules, No. 1 being "Do the other fellow, and do him first"; and No. 2, "It's no crime, unless you are caught."

Yet the uneasy seats of some of our distinguished senators and representatives in Congress and the striped design of clothes worn by an increasing number of well-known bankers, promoters, and other public and private officials who have played the game, not observing Rule 2, would indicate a growing desire on the public's part to change the rules for perhaps more ethical ones.

Each individual is partly responsible for existing rules and standards of ethics in business, and when we really want a change for the better, the change will come.

Don't duck behind the other fellow—it's up to you and me individually, and the changing of the code is a personal matter; for when these things are settled individually, be sure collective action will promptly and effectively follow.

The Burr Nursery Co. of Manchester, Conn., is building a new concrete storehouse 75x100 feet and 16 feet high on Oakland street, which will have a capacity of 10,000 trees and shrubs.

Doings of Societies

INTERNATIONAL APPLE SHIPPERS' ASSOCIATION

This important convention will be held in Detroit, August 9-11. The secretary of the Association is Mr. R. G. Phillips, Rochester, N. Y.

The subjects which will receive attention by the conference are cold storage and its restrictions, storage in transit, standardization or grading and packing legislation, and apple auctions.

A new feature of the program of this live organization is the banquet which will be given on the evening of Thursday, the 10th.

AMERICAN GLADIOLUS SOCIETY

The second annual meeting of this society will be held in Baltimore on August 17. An attractive prize list has been arranged and a short program will be carried out.

President C. F. Hendrickson, Floral Park, L. I.

PACIFIC COAST NURSERYMEN

ANNUAL MEETING AT SAN JOSE, CAL.

The annual meeting of this live organization was held at San Jose, Cal. on June 23. The attendance was a representative one. Live topics were discussed by practical men.

Officers: President, P. A. Dix, Utah; vice-president, C. F. Lansing, Oregon; C. H. Smith, Salt Lake City; J. Valance, San Francisco; Ray Hartley, Idaho; A. W. McDonald, Washington; Chas. Trotter, British Columbia, and D. J. Tighe, Montana; secretary-treasurer, C. F. Tonneson, Washington; executive committee, M. D. Soles, Salt Lake City; A. McGill, Oregon; Leonard Coates, Morgan Hill, Cal.

Program

The following subjects were discussed at this meeting: "Nurserymen and Horticultural Authorities," by H. McDonald, president Oregon Nursery Co., Orenco, Ore.; "Sane Inspection Laws," by John S. Armstrong, Armstrong Nurseries, Los Angeles, Cal.; "Insurrecto Nurserymen," by J. W. Jeffrey, California State Commissioner of Horticulture; "Attitude of Nurserymen toward Horticultural Laws and Inspectors," S. A. Miller, Milton Nurseries, Milton, Ore.; "Why the Nurseryman Should Stand in the Position of an Educator to the Fruit Growers," Prof. E. J. Wickson, Dean of Agriculture, University of California; "Plans for Growing and Keeping Nursery Stock," by A. McGill, Oregon Nursery Co., Orenco, Ore.; "Apple Seedlings in the Northwest," by A. W. McDonald, Washington Nursery Co., Toppenish, Wash.; "The Value of Cleaning Seedlings Before Planting," by C. F. Lansing, Salem, Ore.; "The Nurseryman a Pioneer," by P. A. Dix, Roy, Utah; "Pedigreed Stock: Does it Pay?," by Leonard Coates, Morganhill, Cal.; "Virtues and Faults of Different Kinds of Pear Stock," by N. S. Bennett, Medford, Ore.

The National Nurseryman

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ROOT-KNOT—E. A. Smith, Lake City, Minn.
MEMBERSHIP—John Watson, Newark, N. Y.

STATE AND DISTRICT ASSOCIATIONS.

American Nurserymen's Protective Association—President, J. W. Hill, Des Moines, Ia.; secretary, Thomas B. Meehan, Dreshertown, Pa. Meets annually in June.
American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.
Association of Oklahoma Nurserymen—President, J. A. Lopeman, Enid, Oklahoma; secretary, C. E. Garee, Noble, Oklahoma.
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Eastern Association of Nurserymen—President, Wm. Pitkin, Rochester, N. Y.; secretary-treasurer, William Pitkin, Rochester, N. Y. Meets annually in January.
National Association of Retail Nurserymen—President, E. S. Osborne, Rochester, N. Y.; secretary, F. E. Grover, Rochester, N. Y.
National Nurserymen's Association of Ohio—President, J. W. McNary, Dayton, O. secretary, W. B. Cole, Painesville, O.
Pacific Coast Association of Nurserymen—President, P. A. Dix, Roy, Utah; secretary-treasurer, C. F. Tonneson, Tacoma, Wash. Meets annually in June.
Pennsylvania Nurserymen's Association—President, Samuel C. Moon, Pa., secretary, Earl Peters, Mt. Holy Springs, Pa.
Southern Nurserymen's Association—President, W. A. Easterly, Cleveland, Tenn.; secretary-treasurer, A. I. Smith, Knoxville, Tenn.
Tennessee Nurserymen's Association—President, A. I. Smith, Knoxville, Tenn.; secretary, G. M. Bentley, Knoxville, Tenn.
Texas Nurserymen's Association—President—J. B. Baker, Ft. Worth, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.
Western Association of Nurserymen—President, Geo. A. Marshall, Arlington, Nebr.; secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets annually second Wednesday in December.

NOTABLE PROGRESS IN APPLE BREEDING

In the departments of floriculture and in vegetable culture, records of remarkable achievements in plant improvement work are not difficult to find. These are plants of comparatively short generation. But where the individual deals with plants of long generation, like the apple and the pear, examples of systematic effort resulting in real progress are relatively scarce.

A bulletin comes to our table from the Director of the Dominion Experimental Farms of Ottawa, Canada, Dr. William Saunders, which recounts a most interesting episode in the breeding of apples for a cold climate.

When the Experimental farms were established, one was located in each province, each of the then organized provinces of the Dominion, which resulted in one being placed in Manitoba and another in the Northwest Territories, which had not then been placed on provincial footing. At that time no apples of any merit were known to be sufficiently hardy to meet the requirements of the northwest plains country. At the suggestion of Messrs. Gibb and Budd, of the Province of Quebec and Iowa, respectively, who had recently traveled in Russia, the Director of the Experimental Farms turned to the steppe country of Russia for a foundation, or for primary forms of the apple with which to begin the work of developing varieties adapted and worthy of cultivation in that trying climate. To this end, the berried crab, *Pyrus baccata*, was imported from Russia, seedlings grown and as soon thereafter as possible, crosses made with the hardiest forms of the cultivated apple and the cultivated crab.

These crosses included many of the leading sorts of crab-apples and most of the hardier types of Russian and northwestern apples. The work was notably successful in securing hybrids. The trees came into bearing early, and some twenty varieties have been described and named, and distributed to settlers throughout the Provinces of Manitoba, Saskatchewan, and Alberta.

It is to be remembered that one of the parents, the berried crab, *Pyrus baccata*, has never been injured by winter's cold at Indian Head or at other points in the Northwest Territories where tested. The trees have been propagated on *Pyrus baccata* stocks and distributed to carefully selected farmers throughout the Northwest. Among the hybrids of *Baccata* are crosses with Haas, with Pewaukee, with Tetofsky, with Yellow Transparent, McIntosh, McMahon White, and several of the Russian varieties. This is a case where a small form of the apple, formerly producing fruit averaging less than a half inch in diameter, was crossed with the cultivated, hardy kinds. Many of the cross breeds of the first generation were twelve to fourteen times heavier than the pistillate bearing *Pyrus baccata*. The twenty varieties mentioned above are selected out of some eight hundred which have fruited. The remainder were inferior or unpromising in one respect or another.

Of the crosses with *Pyrus prunifolia*, which is the botanical name of the Siberian crab, the fruit has reached a size of two inches in diameter, though most of the specimens are below this size. The flesh of this race of hybrids is mostly fine-grained, juicy, with occasional traces of astringency. In

this instance, the crab characters were naturally somewhat intensified by the combination. This strain of hybrids is particularly promising on the score of hardiness.

This line of work is particularly commendable and notable, for the reason that it started out to produce an apple product adapted to a region in which the apple was not native, and the cultivated forms were unable to withstand climatic vicissitudes. The fact that these primary forms, which are not, of course, to be classed as dessert fruits, have been produced represents striking results, and this work will act as great encouragement to plant breeders generally, who are in regions where problems of a similar or allied character prevail. Dr. Saunders has been associated with plant breeding work for more than half a century, and his name will always be associated with the production of worthy forms of grapes, raspberries, gooseberries, and apples. This work, of course, being backed by a governmental institution, is only in its infancy, and may be expected to go on and improve with the years.

COST OF GROWING APPLES IN WESTERN NEW YORK

A very good piece of work being carried on by the Division of Farm Management of the United States Department of Agriculture is that of ascertaining by actual record the cost of production of the various orchard and farm products.

Mr. M. C. Burritt has made a careful record of the items constituting the cost of managing an orchard of six acres containing 234 trees. He finds that the spray material has cost him \$2.28 per acre per year; the barrels have cost him \$21.76; labor has amounted to \$37.91; equipment has cost \$4.58; and the interest on the land investment amounts to \$5.67. The total cost per acre is \$73.38.

Taking these figures as a basis, Mr. Burritt believes that he could deliver a barrel of apples at his station at from \$1.00 to \$1.25 under average crop conditions, and in doing this he would receive about five per cent on the capital invested besides fair wages for his labor. In addition to the apples which could be marketed in barrels, he would have culls and windfalls representing clear profit. These have amounted to 29 cents per barrel during the last nine years. He believes, finally, that he could grow and sell a barrel of apples for 90 cents and pay all expenses connected with its production. Of course a five per cent rate of interest would not take care of the speculative risk which is inevitably associated with crop production, and therefore the profit should be very much larger than this figure.

BRITISH COLUMBIA APPLE PACKING SCHOOL

That our friends on the Canadian Pacific Coast are alive to the necessity of training men in the business of apple packing is evidenced by the fact that the Department of Agriculture conducted thirty packing schools distributed throughout the Province last season. From these there were graduated over four hundred pupils. Diplomas are given to those who show greatest proficiency. The necessity of packing fruit with the greatest possible skill and accuracy is becoming

more and more impressed upon the growers. Each year the quality of the product is scrutinized with greater care by the consumer.

THE CHERRY SEASON

Throughout the East very favorable reports have been received of the returns and behavior of cherry orchards. In Western New York, notably in the Lake Erie region, sour cherries have proved a very profitable orchard crop. In the Niagara district on the Canadian side equally favorable reports are received. A Canadian grower announces that he received \$1.75 for an eleven quart basket of early purple cherries. Black Tartarians brought as high as \$1.50, while Windsor cherries were sold for \$1.90 per basket. Rot has been very little in evidence on account of the dry weather in May.

fruit and plant Notes

BRACKETT PEACH FROM MAYFIELD ORCHARDS, BERCKMANS BROS., GEORGIA

Sir: We are sending you by this mail a few samples of "Brackett" peach. Kindly test same and give us your opinion of this variety. We have tested this variety at our Mayfield Orchards for the past six years with most satisfactory results. Its period of ripening commences just at the close of Elberta season, which makes it a most valuable variety for commercial purposes. This peach is evidently a cross between Smock and Chinese Cling. It was named by us in honor of Col. G. B. Brackett, Pomologist, U. S. Department of Agriculture, Washington, D. C.

The specimens sent are of average size. This peach has good carrying qualities and everything to commend it for commercial purposes.

BERCKMANS BROS.,

Augusta, Ga.

Description: Size, $2\frac{3}{4} \times 2\frac{1}{2}$; form, oval, depressed laterally; color yellow, partly covered with carmine blush; down moderately thick; cavity deep, roundish; suture well marked; apex sharply pointed; flesh yellow, streaked with red near pit, firm, juicy, fair quality; season July 15-20. This reminds one of the Elberta tribe, and following the Georgia Elberta season it appears to have considerable value. It arrived in good condition and kept for several days without any special cooling provision.

NEW STRAWBERRIES

The New York Experiment Station at Geneva has been studying the merits of the newer strawberries presented to the trade during the past few years and has set down the results of its findings in Bulletin 336. This bulletin contains a large amount of useful information. One of the striking points brought out is that water is a very important factor in strawberry culture. Ripe fruit contains in each 100 pounds from 87 to 95 pounds of water. Therefore, at the maturing period, abundance of water is an essential. The following varieties were found to be very productive: Battenburg, Clifton, Early Ozark, Iowa, Paul Jones, Rockhill No. 10, Swedenberg.

The following were found to be unproductive: Americus, Glastonbury, Goree, Irena, Red Bird, Rockhill No. 7, Rockhill No. 9.

The seasons are listed as follows:

Season early: Early Ozark, Highland, Irena, Mascot, Monroe, Parcell Early, Red Bird, Rockhill No. 9, Swedenberg, Wooster.

Season late: Americus, Greenwood, Heritage, Labell, Manhattan, Matthew Crawford, Nonsuch, Orem, Orphan, Outlander, Salisbury, Silver Coin.

NOTES ON PLUMS

(From the Special Report of the American Pomological Soc.)

The committee in charge of this department of the Report, composed of F. A. Waugh, U. P. Hedrick, C. L. Watrous, and J. W. Kerr, state that important changes have been going on in the standing of the different classes of plums, though no such revolutionary occurrences

have taken place as the introduction of the Japanese varieties some years ago. The most important changes relate to the localization of the different classes and varieties. It is pointed out that a class which is successful and popular in one section may be quite otherwise in another. The American plums appear to be at best for Iowa, Wisconsin, and the neighboring states. The Domestica plums, including the Damsons, appear to be best for southern Michigan, New York State, Massachusetts, and Connecticut. Plums of the Hortulana class, of which Wild Goose is a prominent member, appear to be most profitable in southern Jersey, Delaware, and the Maryland peninsula, while in the Southwest those of hybrid parentage, combining perhaps Japanese and Hortulana blood, succeed best. The Japanese varieties continue to be planted extensively over a wide range of territory. They are vigorous, productive, the fruit is handsome and carries well. The trees, however, are not long lived. Among the varieties which have not grown in popularity in the East are the Wickson, the Climax, and Simoni. The main fault with these is lack of productiveness.

In the marketing of plums, the Climax baskets are used most extensively, except on the Pacific Coast, where the crates or carrier package is in more or less universal use.

CO-OPERATION

Important Work of the Root Gall Committee

By Chairman Smith

Mr. E. A. Smith of the Jewell Nurseries of Minnesota is following up his excellent work in prosecuting root-gall investigations by urging the necessity of establishing experiments in all parts of the country in order to secure such a mass of facts as may be considered conclusive to this end. Mr. Smith urges cooperative experiments in the following letter:

Dear Sir:

A year ago at the National Convention at Denver, the writer was appointed chairman of what is known as the Root Knot Committee. You were kind enough to act as a member of this committee, and we appreciate your cordial support and prompt replies to our various letters.

The writer has been appointed chairman of this Root Knot Committee for the coming year. Considerable interest was manifested in this subject at the meeting recently held at St. Louis. Some articles were presented by different members of the Committee which will be reviewed and referred to later on, there not being time at the Convention at St. Louis.

Several members of the Committee reported that the agitation started a year ago has been a benefit, as it furnished information to inspectors who wanted to do what was right but really had little to guide them. Except in a few cases inspectors were more lenient in their inspection of apple trees, on which there was Root or Crown Gall, than previously. But there remains much to be done.

We make the following suggestions: Let every nurseryman set out apple trees, which have Root Gall upon them, take photographs of some of them when the trees are planted. Some of our members are doing this. As time goes on you will have done something definite and will secure a data to work from. The experiments will be valuable. If work of this kind had been done twenty years ago there would be

very little Root Gall scare now. Remember, we are doing work that will be of special value ten, fifteen and twenty years from now. Report if you are able to do some experimenting along this line.

If you can interest other nurserymen to do the same thing, all the better. It is also necessary to get Experimental Stations to do some work by planting out a hundred trees, or more. If you do the same thing, and do the work just as well, the result of your experiments will not have the same weight as the same work done by the Experimental Station. They carry authority. Now, if you can interest the Experimental Stations in your state to do some of this work, you will render valuable service to the nurserymen of the entire country.

If as chairman of this Committee, I can render you any assistance, or can write parties regarding this matter, who have Experimental Stations in charge, advise me and I shall be pleased to do what I can. Any items of interest along the line of Root Gall Experiments or of inspections, I shall be pleased to have you send me direct. I wish to gather all the information possible, then condense it and either report it to the Association, or hold it on file for future reference. Remember, this work is far reaching. It is not for the individual, but the country at large.

We also desire committees in the following states, where we were unable to secure them last year. If there is anyone you can recommend, kindly do so. Alabama, Idaho, Massachusetts, Colorado, Michigan, Virginia, New York.

Following is a list of chairmen of Committees already appointed: California, Geo. C. Roeding, Fresno; Georgia, L. A. Berckmans, Augusta; Georgia, C. T. Smith, Concord; Indiana, C. M. Hobbs, Bridgeport; Illinois, Guy A. Bryant, Princeton; Kansas, J. H. Skinner, Topeka; Missouri, R. J. Bagby, New Haven; Minnesota, E. A. Smith, Lake City;

Montana, D. J. Tighe, Billings; Nebraska, G. A. Marshall, Arlington; North Carolina, J. Van Lindley, Guilford; Oklahoma, J. A. Lopeman, Enid; Oregon, Oregon Nursery Co., Orenco; Pennsylvania, Abner Hoopes, West Chester; South Dakota, Geo. H. Whiting, Yankton; Tennessee, H. W. Chatten, Winchester; Texas, J. S. Kerr, Sherman; Washington, Washington Nursery Co., Toppenish; Maryland, Orlando Harrison; Iowa, E. S. Welch, Shenandoah; Ohio, T. J. Dinsmore, Troy.

Respectfully submitted,
E. A. SMITH,
Chairman Root Knot Committee.

Business Movements

The Inland Nursery and Floral Company of Spokane, Wash. has completed a \$30,000 greenhouse plant in the home city.

CHARLES WILLIS WARD, ORNITHOLOGIST

Florists and nurserymen are well acquainted with Mr. Ward as the founder of the Cottage Gardens Nursery Co., and an enthusiastic and successful plant breeder. It is interesting to note that Mr. Ward has lately interested himself in the preservation of our wild fowl by presenting to the state of Louisiana a large tract of land on an island in the lower Mississippi for the establishment of bird homes safe from the hunters' gun.

SPRAY RESIDUE ON EXPORT APPLES

English receivers are beginning to look askance at the heavy coat of fungicide or insecticide carried by some of the American apples.

Northwest Pacific Coast growers may be over doing a good thing. There is such a thing as getting on too much dope. It will react badly if English consumers begin to kick.

A CANADIAN VISITOR

W. O. Burgess, and Geo. E. Wedge, of the Auburn Nurseries, Queenstown, Ontario, Canada, called on Rochester nurserymen, and at the office of the NATIONAL NURSERYMAN during the month of July.

"My advertising in your paper paid me well."

CHAS. G. CURTISS, Callicoon, N. Y.

Cannot get along without every issue of THE NATIONAL NURSERYMAN.

E. P. BERNARDIN, Kans.

AMERICAN SEED TRADE ASSOCIATION

The following officers were elected at the recent meeting: President, Leonard H. Vaughan, Chicago, Ill.; first vice-president, Marshall H. Duryea, New York; second vice-president, Edgar Gregory, Marblehead, Mass.; secretary-treasurer, C. E. Kendel, Cleveland, O.; assistant secretary, J. H. Ford, Ravenna, O.

Obituary

WILLIAM TAAT

The weekly journals have chronicled the death of Wm. Taat in Boston on June 13. Mr. Taat was the well known American representative of Messrs. Van Waveren & Sons of Hillegom, Holland. His death was the result of a railway accident resulting in the loss of his foot. Mr. Taat has been in the United States since 1898. He leaves a wife. His record is that of an ambitious, industrious, efficient worker.

WILLIAM A. WOODWARD

The senior member of the firm of William A. Woodward & Son died on July 2. He was a little past middle age and was well known as an active man in seed-growing circles.

J. A. MCPHERON

Mr. McPherson was a nurseryman of Carrollton, Ill. He died at the advanced age of eighty-five years. He is succeeded in business by his son, R. A. McPherson, of Litchfield, Ill.

W. N. IRWIN

In Washington on July 24th, Mr. W. N. Irwin, for many years an assistant in the Division of Pomology, Department of Agriculture passed away. Mr. Irwin was one of the original appointees under Professor Van Deman and was noted as a man having wide and intimate knowledge of many varieties of fruits. He possessed a pleasing personality and was well known at the meetings of the American Pomological Society.

Our Book Table

PLANT PHYSIOLOGY, by B. M. Duggar. Illustrated. 5 x 7½. Published by The MacMillan Company, New York. 1911. Price \$1.60.

This valuable work, which has just come from the press, discusses in its introduction plant production from the standpoint of environment. It then describes the plant cell and its activities. This is followed by a consideration of the role which water plays in plant growth, how it is absorbed, its function in the life processes, how it is transpired, and finally the water requirements of different crops. This method of treatment is continued in discussing mineral constituents, and foods taken from the air.

The food products of plants, both temporary and permanent, are discussed fully; growth in all its aspects forms an exceedingly interesting chapter, though not more so than that on reproduction.

Four or five chapters are occupied by the ecologic aspects of plant physiology, taking into consideration temperature relations, influence of chemical agents, and influences of light.

The work is intended primarily for the college student who desires to get a broad and comprehensive grasp of plant physiology in relation to plant production. It combines some of the features of the older type of book, which described how plants grew, with the newer aspects of this division of botany, which considers the life processes more intimately. The book is clearly written, carefully edited, well illustrated, and one which will be appreciated by the nurseryman and up-to-date farmer as well as the college student.

SPICES AND HOW TO KNOW THEM, W. M. Gibbs. 6½ x 9¾. 179 pages. Illustrated. Published by The Matthews-Northrup Works, Buffalo, N. Y.

It was indeed a new field that Mr. Gibbs entered when he started to write the history and description of the various spices: for nothing at all exhaustive had ever been written on the subject. The difficulty of the task was increased by the ignorance and lack of acquaintance with the arts of photography or painting among the peoples inhabiting most of the islands where spices grow; but a most interesting volume is the

result of Mr. Gibb's efforts. It is the more valuable because so little of the information included within its covers could be obtained elsewhere with any degree of ease. The book is opened by an account of the early history of spices. A chapter is devoted to each of the several spices, accompanied by colored illustrations of the spice trees and of different parts of the spices as they grow. An attractive feature is found in the many views of cities or plantations in the little known countries where spices are native. The most important chapter in the work is without doubt that on the detection of adulteration in spices. The book can be highly recommended alike to the housewife, to the grocer who deals in these condiments, and to the would-be planter of spices.

ARSENATE OF LEAD.

The chemist of the Central Experimental Farm at Ottawa has recently made an examination of the different brands of arsenate of lead. In connection with a discussion of this substance he says that there are practical difficulties in the manufacture or commercial arsenate of lead paste which may be said to almost preclude the possibility of turning out continuously a product uniform in composition. Further, "other things being equal, the paste containing the least water, will be the strongest." The poisoning value of the paste is determined principally by the percentage of arsenic oxide. The amount of soluble and insoluble impurities strikingly affect the strength of the paste, and these points are illustrated as follows:

"To determine the economic values of any number of brands it will be necessary for the purchaser to calculate the cost per pound of the arsenate of lead present in the paste. An illustration may serve to make this clear. Two brands, A and B, are offered: the price of A, laid down, is 15 cents per lb., and it contains, approximately, 35 per cent. of water and impurities; B is 12 cents per lb., laid down, and contains, approximately, 50 per cent. of water and impurities. In the case of A, 65 lbs. arsenate of lead cost \$15, or 23 cents per lb., while in B, 50 lbs. arsenate of lead cost \$12, or 24 cents per lb."

Catalogues Received

Huntsville Wholesale Nurseries, Huntsville, Ala. Bulletin No. 9, April 25, 1911; Bulletin No. 10, May 1, 1911; Bulletin No. 11, May 8, 1911.

Cartwright & Goodwin, Kidderminster, England. Over-seas and preliminary list of daffodils and narcissi, spring, 1911.

Andorra Nurseries, Chestnut Hill, Philadelphia, Pa. Post-card describing the Rose of Sharon.

Elm City Nursery Co., New Haven, Conn. Spring planting mailing card.

Winfield Nursery Co., Winfield, Kans. Bulletin No. 3. Dormant Stock in Storage.

Chase Nursery Co., St. Louis, Mo. Bulletin No. 5. Bulletin No. 6. Boxed lots in cold storage.

Chase Brothers Company, Rochester, N. Y. Bulletin No. 7. Wholesale price list for Spring, 1911, April 3d.

Desfosse Thuiller Fils & Co., Orleans, France. Special offer to the American trade. Fruit tree stocks,—Evergreen and deciduous tree and shrub stocks.

Hemeray Aubert Nurseries, Orleans, France. Wholesale price list. Fruit tree stocks, young ornamental trees and shrubs. Roses, stocks, and etc.

Union Nurseries, H. W. Van der Bom, Director, Oudenbosch, Holland. Wholesale trade list of forest and ornamental trees, spring flowering—forcing and American plants, coniferæ and evergreens.

Barbier & Co., Orleans, France. Preliminary list of fruit tree stocks and ornamental stocks.

Isaac Hicks & Son, Westbury, L. I. "Facts about Hicks' Rhododendrons."

Jos. P. Chaput Nursery, Auburn, Me. Annual catalogue and price list.

WANTED

Position by young woman to do stenographic and general office work. Nearly seven years' experience in nursery office. Good reference.

S, care National Nurseryman, Rochester, N. Y.

Young man (36) with eight years' experience as assistant office manager with large wholesale nursery, desires position as general office man with progressive concern in which there is a chance for advancement.

Address, E. H. N., care of National Nurseryman

BUSINESS OPPORTUNITY

A stock interest will be sold and employment given to a young or middle-aged man in an established Nursery Co. (Inc.) with a business approximately \$22,000 to \$25,000 this year. Business will likely soon run to \$30,000 or over. Large nearby retail trade. Address

X, care The National Nurseryman,
ROCHESTER, N. Y.

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FIFTY THOUSAND APPLE and FIFTY THOUSAND CHERRY TREES for Fall Delivery. Give full particulars about stock when quoting prices. Terms Cash. Address

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Large quantities of fruit stocks,—Apple, Pear, Mahaleb, Myrobalan, Quince. Complete collection of Ornamental Shrubs, Conifers and Roses.

Catalogues on application. We have no agents.

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Partial View of Persimmon Trees in Nursery, shown in our Retail Catalogue, page 23.

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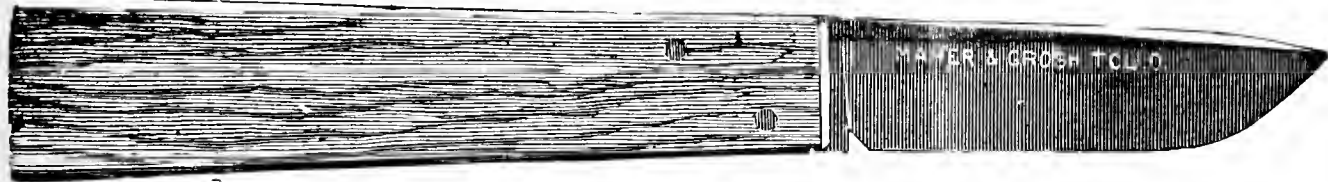
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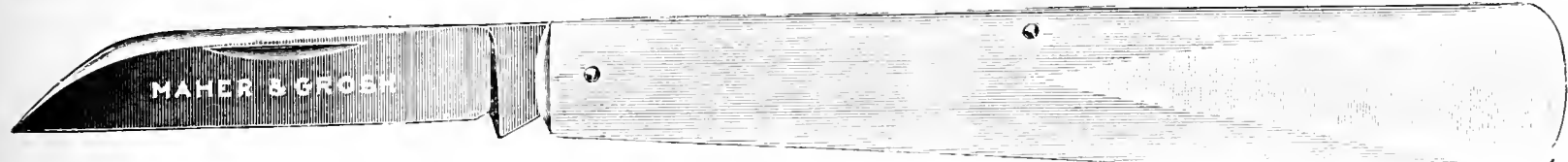
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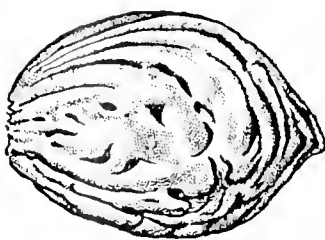
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All on French roots—no finer grown.

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20,000 1 yr. Sweet and Sour Cherry.

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2,000 Quince, 1 year.

We're *always* proud of the stock we supply, because it *must be right* before it leaves us; if it doesn't measure up to the Harrison standard it is hauled out and burned; never gets to the packing shed at all.

Here are a few *extra good* things we're offering for the fall trade; they're well grown, well rooted, well developed; and you and your customers will be quick to appreciate their high quality.

Drop us a line now for complete list, with prices; better still, say what you are most in need of and we'll quote on the quantity you want.

Come down and see us this summer; look over our 2500-acre place for yourself. Our doors are open, and we'll do our level best to make you glad you come. The State Horticultural Society will meet here Aug. 24th. Let us know when to expect you.

GRAPE VINES

10,000 Concord, 2 year, transplanted
10,000 Concord, 1 year, fine
10,000 Moore's Early, 2 year transplanted
Our grapes are in fine shape; the vines will please you.

ASPARAGUS ROOTS

100,000 2 year strong Asparagus roots
200,000 1 year, leading varieties: Palmetto, Barr's, Conover's, Giant.

ORNAMENTALS

MAPLE TREES

You'll not find a finer lot of maples than we grow in our Nurseries at Berlin; our rich, loose soil encourages root formation, and each tree has plenty of room to grow. Your trade will be pleased with these trees.

NORWAY MAPLES

100 Norway Maples, 3 inches, 12 feet
1,000 Norway Maples, 2 inches, 10 to 12 feet
12,000 Norway Maples, 1 1/2 inches, 10 ft.
13,000 Norway Maples, 1 1/4 inches, 9 to 10 feet
15,000 Norway Maples, 1 inch, 8 to 9 ft.
110,000 Norway Maples, 3/4 inch, 7 to 8 feet
Straight, smooth—no finer grown.

SUGAR MAPLES

1,000 1 1/2 inch, 10 feet
1,000 1 1/4 inch, 8 to 10 feet

SILVER MAPLES

1,000 Silver Maples, 3 inches 12 feet
1,000 Silver Maples, 2 inches, 10 to 12 feet
2,000 Silver Maples, 1 3/4 inches, 9 to 10 feet
3,000 Silver Maples, 1 1/2 inches, 9 to 10 feet
4,000 Silver Maples, 1 1/4 inches, 9 to 10 feet
5,000 Silver Maples, 1 inch, 8 to 9 feet
10,000 Silver Maples, 3/4 inch, 7 to 8 feet

MISCELLANEOUS

1,000 Russian Mulberry, 8 to 10 feet
1,000 Catalpas, 8 to 12 feet
1,000 Box Elder, 2 inches
1,000 American Black Ash, 1 1/4 inches
1,000 Carolina Poplars, 1 1/4 inches
1,000 American Linden, 1 inch
1,000 American Elm, 1 inch

CALIFORNIA PRIVET

Buy your privet from Privet headquarters—we have acres and acres of it in all sizes and all ages. Can make prompt shipment of any quantity. You can build a reputation for quality on such Privet as this.

5,000 8 feet, 4 year, 9 branches or more
6,000 7 feet, 4 year, 8 branches or more
25,000 6 to 7 feet, 3 year, 7 branches or more
50,000 5 to 6 feet, 3 year, 7 branches or more
60,000 4 to 5 feet, 3 year, 7 branches or more
70,000 3 to 4 feet, 3 year, 7 branches or more
75,000 3 to 4 feet, 2 year, 6 branches or more
70,000 2 to 3 feet, 2 year, 5 branches or more
165,000 18 to 24 in., 2 year, 4 branches or more
160,000 18 to 24 in., 1 year, 3 branches or more
155,000 12 to 18 in., 1 year, 3 branches or more
50,000 6 to 12 in., 1 year, 3 branches or more

BERBERIS THUNBERGII

50,000 2 year, 12 to 18 inches
5,000 3 year, 18 inches
1,000 4 year, 2 to 3 feet



Part of One Block of Grapes at Harrison's Nurseries

ROSES

5,000 Baby Ramblers

RHODODENDRONS, 2,000

AZALEAS, 2,000

SPRUCE, ARBORVITAE, ETC.

There's a great deal in knowing how to grow evergreens successfully. We pride ourselves on the high quality of the product of this department of our Nurseries. Neither time nor money has been spared to procure the best, and the stock we offer is such as you may well be proud to sell your trade. It includes some choice importations from the leading European Evergreen specialists. Get in touch with us before you order your stock for next year.

NORWAY SPRUCE

500 6 feet	500 4 feet
500 5 feet	500 3 feet
	50,000 2 feet

KOSTER'S BLUE SPRUCE

1,000 2 feet	1,000 12 inches
1,000 18 inches	1,000 6 inches

COLORADO BLUE SPRUCE

50 3 to 4 feet	1,000 12 inches	1,000 18 inches
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HEMLOCK SPRUCE

100 2 to 3 feet	100 18 inches
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GLORY OF BOSKOOP

500 3 feet	500 2 feet
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PYRAMIDAL AMERICAN ARBORVITAE

1,000 4 feet	1,000 3 feet	500 2 feet
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BLUE CEDAR

500 4 to 5 feet	500 3 to 4 feet
-----------------	-----------------

AMERICAN ARBORVITAE

100 3 feet	1,000 2 feet
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Harrison's Nurseries
J.G. HARRISON & SONS PROPRIETORS
BERLIN MARYLAND



THE NATIONAL NURSERYMAN



SEPTEMBER, 1911

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

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SMALL FRUITS

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APPLE SEEDLINGS

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1500 Acres

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Apples, 1 yr. br. roots, tr. 7/12, 6/10, 5/7, 3/5 m/m.

" 1 yr. untr. str. roots, 7/12, 6/10, 5/7, 4/6, 3/5 m/m.

Pears, 1 yr. br. roots, tr. 7/12, 6/10, 5/7, 3/5 m/m.

Quince, 1 yr. Angers cuttings, 7/12, 6/10, 5/7 m/m.

Myrobolan Seedlings, 1 yr., 5/9 m/m.

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All from Vincent Lebreton's Nurseries, Angers, France. Best grading and packing.

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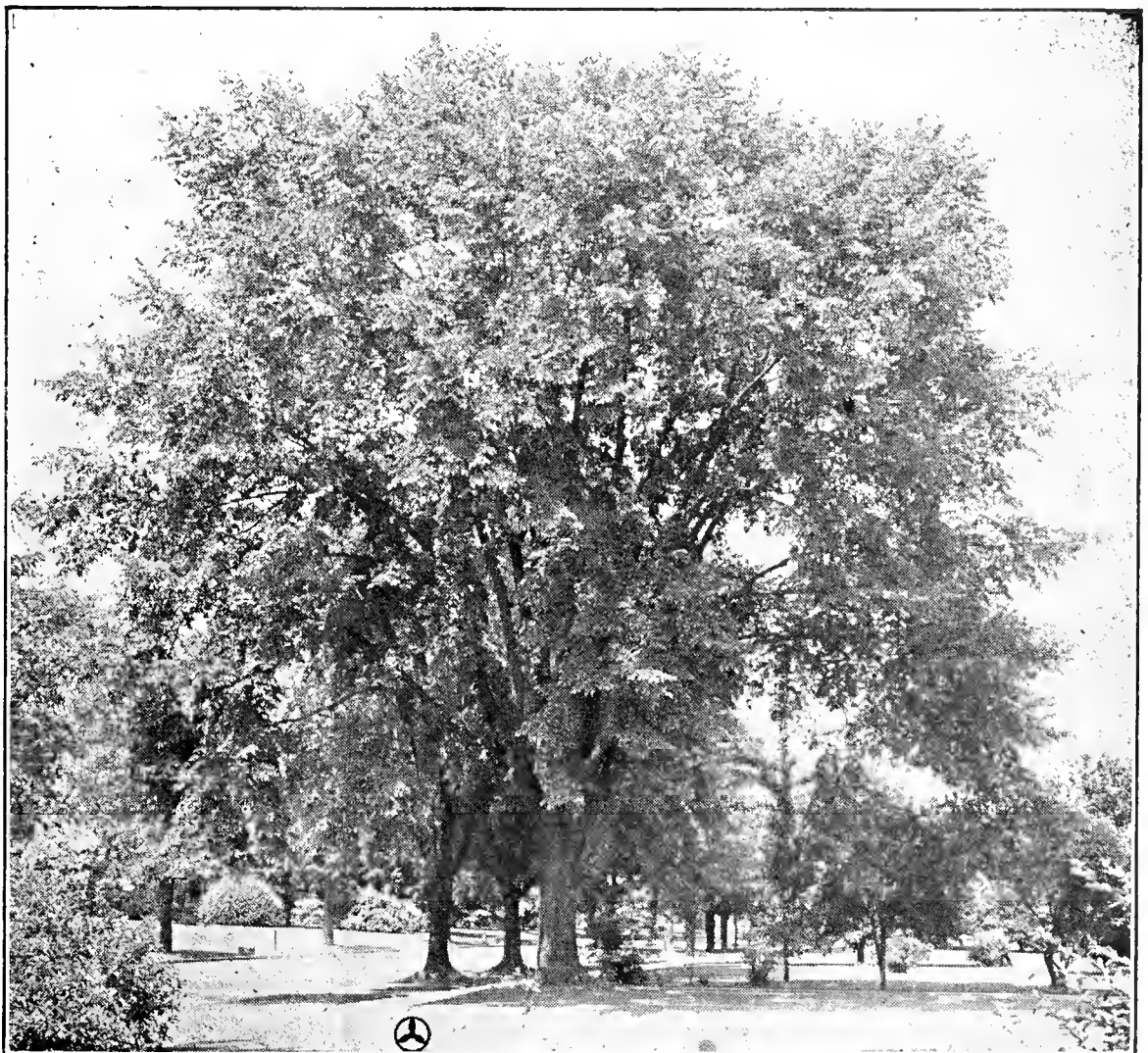
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A Fine Block of
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ORNAMENTAL TREES SHRUBS

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TREE BOX, 3 to 6 feet

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C. M. HOBBS & SONS

BRIDGEPORT, IND.

APPLE—1, 2 and 3 year in leading sorts.

CHERRY—1 and 2 year fine stock.

PEAR—1 and 2 year in leading sorts.

PLUM—1 and 2 year Japan, European and native sorts.

PEACH—1 year leading sorts.

PRIVET—1 and 2 year fine stock.

SHADE TREES in car load lots Norway Maple, American Elm, Box Elder, Silver Maple, etc.

We also have a general line of other stock not mentioned above.

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CHERRY, 1 inch up, $\frac{3}{4}$ to 1 inch, $\frac{5}{8}$ to $\frac{3}{4}$ inch, and all under grades. Our surplus of 75,000 Cherry are first class in every particular.

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PEACH, PLUM, APRICOT, ALMOND, one year, mostly heavy grades.

PEAR, all grades, large surplus.

ONE HUNDRED THOUSAND 2-year, heavy California Privet. Special quotations in 50,000 lots. If in the market let us quote you.

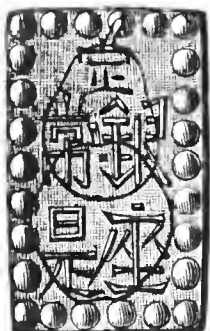
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APPLES—Commercial varieties, one year, in large supply. As fine in quality as ever grown.

PEARS—Kieffers, one and two years old. A much smaller crop than heretofore.

CHERRIES—On Mazzard. One year. Bing, Lambert, Napoleon, Black Tartarian.

CHERRIES—On Mahaleb. One and two years. Ea. Richmond, Dyehouse, Montmorency, Wragg, Royal Duke, in small supply.

PEACHES—We excel in Peaches, and of these we will have as fine a stock as we have ever grown, both in one year and June Buds.

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This stock is especially adapted to the most severe usage, being thoroughly waterproof & weather-proof. "Once used, always used."

Send for samples and prices. Our reference are the largest nursery men in the United States.

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TREES, SHRUBS, EVERGREENS,
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PLANTS**

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TREE SEEDS we can supply in limited quantities.

Send list of your requirements for lowest prices. Trade list ready end of September.

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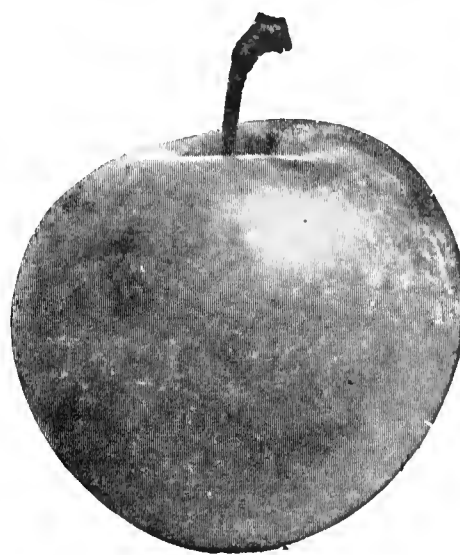
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APPLE AND PEAR SEEDLING
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150 Acres

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ABUNDANCE PLUM.

**MALONEY BROS.
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DANSVILLE, N. Y.

Offer strictly hardy up-land grown trees guaranteed true to name and free from scale, a good assortment of the following:

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| 2 yr. European Plum | 2 yr. Dwarf Pear |
| 2 " Japan Plum | 3 " Std. Apple Grafts |
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| 2 " Standard Pear | 2 " Carolina Poplars |

Carefully selected buds for budding furnished at a reasonable price.

Personal attention given to each and every order.

Let us price your list of wants. We will save you money.

Secure your trees and buds from a section where San Jose Scale has never been found.

Cyclopedia of American Horticulture

L. H. BAILEY

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Practical instructions on every subject connected with Horticulture. Four handsome quarto volumes; 2,800 original engravings, 50 full plates; 2,016 pages and 4,357 articles; Total plants accounted for 24,434.

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CONNECTICUT NURSERYMEN'S ASSOCIATION ON THEIR SUMMER OUTING AT THE ELM CITY NURSERY COMPANY'S
GROUNDS, NEW HAVEN, CONN., JULY 25, 1911

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XIX.

ROCHESTER, N. Y., SEPTEMBER, 1911

No. 9

SHOULD A NURSERYMAN SELL TO PARKS, CEMETERIES AND LANDSCAPE GARDENERS AT TRADE PRICES?

Thomas B. Meehan

First, let us try to decide what constitutes a "trade rate"? Is it the trade catalogue prices which nurserymen publish or is it the inside price which nearly every nurseryman is ready and willing to quote by letter to the trade in general, or perchance to a few selected nurserymen who favor him with regular orders or, as in some instances, worry him with the belief that his prices are high and that all other nurserymen are selling lower than he.

Or, let us take the so-called "trade catalogue," Asterbilts Trade catalogue quotes Norway Maples at $1\frac{1}{2}$ to 2 inch caliper at \$1.50 each. The Standard Nursery Co., same size at \$1.25 each. Grabem & Co., the Holdfast Nursery, I. Gottem & Sons each offer same grade of tree at anywhere from 75 to 85 cents each. Now which of all of these prices is the Trade price?

Examine the trade prices on evergreens. You will find that two or three feet Norway Spruce are offered all the way from 15 cents to 50 cents, and American Arbor Vitæ same size at anywhere from 10 cents to 40 cents.

This past Spring, I was offered Spirea Anthony Waterer, 18 to 24 inches at the following prices, 6, 7, 8, 9 and 10 cents, all by responsible nurserymen. Now which of these prices is the Trade price?

You may say that these prices on Spirea Anthony Waterer were special prices made according to the quantity of stock each bidder had to offer and those who quoted the lowest prices did so because they or he had a surplus to unload. Grant this to be the fact,—then take the following prices taken direct from Trade catalogues and tell me which of these prices is the correct Trade price, 6, 7, 8, 10 cents.

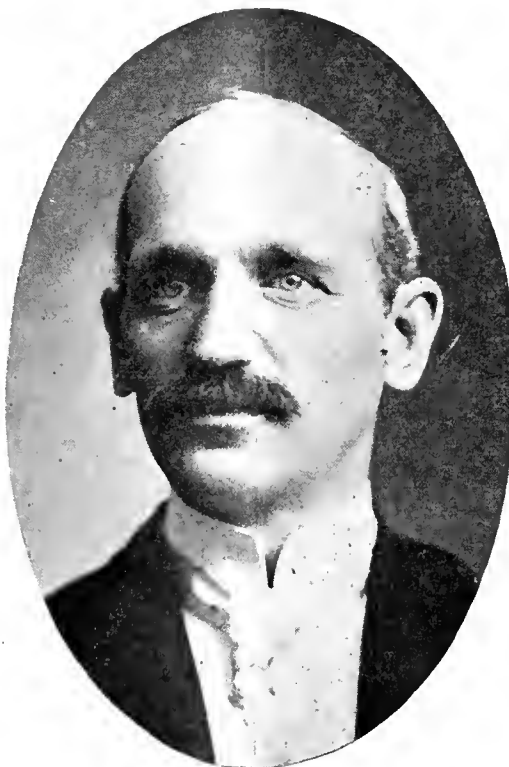
Now take the trade catalogue of a nurseryman whose business is largely with Parks, Cemeteries and Landscape Gardeners, and his so-called trade rates average ten to twenty per cent higher than the prices of the Nurseryman who sells regularly to the trade. Does he not occupy a field of his own and does he do any harm to his fellow nurseryman

by selling to his customers at such prices? True, there may be some nurserymen whose trade prices are still higher but in that case, can you consider those prices trade prices, when the majority of the nurserymen are offering the same stock at lower rates?

But you may say that this nurseryman should sell his stock to his brother nurseryman at a less price than he is selling to the Park, Cemetery and Landscape Gardeners. If he can sell his stock at the trade price he is getting, why should he lose money by selling any part of that stock at a reduced price? If nurserymen buy from him at his trade prices, it is because they want his particular stock, they know it is better than the average run of stock or because they cannot get it elsewhere.

I was told by a certain nurseryman, a prominent member of this Association and a good fellow at that, that a nurseryman had no business to sell to the trade if he could not give him a lower price than he gave to the Parks, Cemetery and Landscape Trade, even though his trade prices were ten to twenty per cent higher in the average than the regular so-called Trade price. Is that right?

This past Spring a certain city in the west required a carload of trees. An Eastern nurseryman was given the opportunity to figure on the lot. His catalogue price was \$1.00 each. The same grade of trees was being offered in the west, near the place the trees were to be delivered, at 50, 60 and 70 cents each. This eastern nurseryman, having a large supply of the trees, and knowing if he got the order, it was like carrying coals to New Castle, offered to deliver the carload at his catalogue price of \$1.00 each, making a net price of about 92 cents each. He got the order, but has not yet been forgiven by certain dealers in the immediate vicinity of the point of delivery, because they say he had cut prices. Yet his price of 92 cents each was fifty to seventy five per cent higher than the average trade price of other nurserymen.



Thomas B. Meehan.

But I may have drifted from the point at issue. If you are prepared to fix the average trade price of *Hydrangea* P. G. 2 to 3 feet at seven cents each and that is the lowest trade price at which all nurserymen will sell the stock, then I would say unquestionably a nurseryman should not sell the plant to Parks, Cemetery and Landscape Gardeners at seven cents each, his price should be at least 20 to 25 per cent higher. Or, if the average price of Norway Maples of a certain grade is \$1.00 then the price to the Park, Cemetery and Landscape Gardener trade should be no less than \$1.25 each, but until some standard price on every item of ornamental stock is fixed and adhered to by all nurserymen alike, east and west, north and south, I fail to see how this question of what is a trade price can be overcome.

In no other trade does this condition of affairs exist. You cannot buy iron pipe, hardware, spades or other tools direct from the manufacturers at what we call trade prices. He may perhaps sell his goods direct to you at a list price and perhaps give you 10, 20 or 30 per cent discount, but when the jobber goes to him for a price, he will get an extra 10 or 20 per cent off, that you cannot get. The jobber is protected.

But conditions are somewhat different between the manufacturer and the nurseryman. The manufacturer knows exactly, to the fraction of a cent, just what his goods cost him to produce and fixes his selling price based on the cost of production, but where is the nurseryman who can say "My 2 to 3 feet *Hydrangea* P. G. cost me exactly four, five or six cents to grow," and can prove it.

A nurseryman once said to me "I keep figures which show me exactly what my stock cost me to grow." and he showed me an elaborate system of figures. I took several items and asked him if he did not think certain items of his expense on that item were greatly in excess of what they actually should be. He assured me they were not and that his figures were taken from correct records kept during the actual process of the work. I took his figures and proved to his satisfaction by his own figures that his men would have to stand with spade poised in the air for half a minute between each spade full of earth to enable them to put in the time his cost sheets required.

From what I have said it may appear to you, gentlemen, that I am in sympathy with the idea of selling nursery stock to Parks, Cemeteries, and Landscape Engineers at Trade prices. I have had occasion in the past to put myself on record as being against the practice and I do so again now, but I still maintain, as I have done in the past,—that until some plan is devised whereby a standard trade price is fixed and maintained on every item and on each grade of nursery stock grown we, as nurserymen can only float along, cut each others throats and at the end of the year count up our profits or losses and pray for the time to come when we can get together in some way and adjust this most difficult and knotty problem, but until that time comes, how are we to know what is a trade price and how much more are we to charge the Landscape Gardeners, the Park and Cemetery Superintendents; and even then we must devise some plan other than a "gentlemen agreement" to compel each nurseryman to stick to it.

I am afraid that when that time comes, we will have no

need of money, every man will love his neighbor like a brother and the angels will sing us sweet songs to lull us to rest.

WHY NOT HAVE MORE LIKE THIS?

Last fall the Kinderhook (N.Y.) Pomological Association was formed, and its membership was limited to twenty. Farming and fruit growing have been looking up in that region of late, partly due to the fact that several recent college graduates have gone into farm work in good earnest in that locality. These young men and the more experienced growers of Kinderhook, with their progressive spirit, realized something of the value of cooperation; and already they have found from specific cases the importance of union to business enterprises. The three objects of the Association are, first, the study of various horticultural problems; second, cooperation in buying and selling, etc.; third, social intercourse. If one can judge from the interesting account in the *Tribune Farmer* for June 8, the Association is fulfilling its threefold mission admirably.

THE MISSOURI BOTANICAL GARDEN

The Missouri Botanical Garden, known to many as Shaw's Garden, is the result of Mr. Henry Shaw's enthusiastic interest in the culture of trees and plants. In 1840, when but forty years old, he was wise enough to retire from active business, having amassed a fortune sufficient for his desires. It was in 1851 that he visited the gardens of the Duke of Devonshire, at Chatsworth, Derbyshire, and immediately afterwards began to plan for an artistic garden which should surround his country residence. This garden was from the first intended to be a source of pleasure and instruction to the public as well as to the owner. The last thirty-five years of Mr. Shaw's life were spent in the development of the extensive grounds in accordance with careful study of the theory and practice of gardening and after the counsel of such a competent adviser as Professor Asa Gray. The garden was maintained and expanded by Mr. Shaw until his death in 1889, and the present director, Dr. William Trelease, was designated for this position by Mr. Shaw himself.

The site of the garden contains about 125 acres, of which only a little over half is developed, and extends from Shaw Avenue on the north to Magnolia Avenue on the south. The garden is open to the public week days from 8 A. M. till half an hour after sunset, and the employees are forbidden to receive fees from visitors. The library and herbarium, each valued at over \$100,000 are open to qualified students.

In accordance with Mr. Shaw's desire to "give pleasure with incidental instruction to the public, to train gardeners and botanists, and to provide for the increase and dissemination of botanical and horticultural knowledge," both the common and Latin names of the many thousands to species and varieties grown are indicated, a four years' course for the training of gardeners has been established, and systematic study of scientific questions is made by the Director and others.

The main divisions of the garden may be briefly described as follows: The flower garden of about nine acres is in the

form of a narrow oblong, and is laid out in a formal manner. The orchard just to the north contains the same area, while to the west may be found the arboretum, which includes, besides a large number of trees, a lily pond, an artificial bog, and a cactus rockery. A trial plantation of at least 2000 kinds of plants is located south of the arboretum. Medicinal plants to the number of several hundred are found nearby, "and the South end of the tract is devoted to a park-like synopsis of about 1400 species representative of the North American flora." The plant houses are grouped above the main entrance, and many rare plants are contained therein.

RECEIVED AT THE EDITORIAL OFFICE

REPORT OF THE KANSAS STATE ENTOMOLOGICAL COMMISSION FOR 1909 AND 1910

This contains the reports of S. J. Hunter and T. J. Headlee, state entomologists, with summaries of orchard surveys, giving number of trees and plants examined. In connection therewith, data is given regarding treatment recommended for those found to be infested with injurious insects or plant diseases.

ACKNOWLEDGEMENT: The National Nurseryman regrets that credit was not given in our last issue to the Experiment Stations of New Jersey, Ohio and Missouri for cuts kindly loaned and used in the August issue.

THE PACIFIC COAST NURSERYMEN'S MEETING

In the way of accomplishments three important features stand out prominently as the result of this meeting says the *Northwest Horticulturist*. First, in the getting together of so large a number of nurserymen covering the entire Pacific Coast, there is significance of the fact that in the matter of fruit and plant production this part of the United States is a unit. Instead of competition between nurserymen of the Coast States, a good and substantial foundation has been laid for co-operation. General acquaintance, each with others of the individual members and of the different methods in practice was made and much good feeling created. As nurserymen naturally occupy the position of educators of the fruit growers, the same features and principals of co-operation are likely to permeate the entire fruit interests of the Pacific Coast in the course of a few years, when competition will be an element of the past.

The association went on record as favoring good laws, both state and national, for the protection of the fruit growing and nursery industries whose interests are mutual, demanding at the same time that these laws shall be intelligently and justly enforced. The association also went on record as favoring reciprocity with our Canadian cousins.

Second, on the matter of standardization, much was accomplished. The jocular terms "Insurrector Nurserymen" and "Insurrecto Inspectors" embodying the discussion in connection helped to fix a standard of conduct on the part of those connected with each of these interests, that the work, which is of ultimate mutual benefit to both, may be carried out more harmoniously. Specific requirements for standardized trees, as to caliper, height and quality were adopted. In short, excellency, in every phase of his work, was the standard set for the ideal nurseryman and for the horticultural officer, knowledge, promptness and justice in the performance of his duties.

President Roeding's address was full of sound suggestions and comments as indicated by the following abstracts.

OUR INSPECTION LAWS

If there is any one thing which will arouse the ire of a nurseryman, it is the subject of inspection of the trees he grows. There is no denying the fact that the nurserymen as a class regard the Horticultural Commissioner with the same feeling of antipathy that the transgressor of human

law has for the policeman. How are we to bring about a change in this state of affairs is the problem that confronts us.

To begin with, I want to say that the inimical feeling that seems to exist between the nurserymen and commissioner must be eliminated at all hazards. It is to the nurseryman's interest to work harmoniously with the commissioners, simply because he is the first one to suffer from the introduction of a new pest. He may have expended thousands of dollars in developing a place, which is in his opinion, admirably situated for his business, and may within a short period be compelled to move to another locality, because his trees on which he has expended so much care and money are either diseased or have become infested with a pest which makes them unsalable. Why is it that nurserymen are constantly seeking new localities to grow their nursery stock, and what impels them to select a place far distant from any horticultural development? The reply is simple; they are influenced by the fear of having their stock, on which they have devoted so much thought, time and money to make it satisfactory to the critical buyer, made unfit for the market by the introduction of a pest from some nearby orchard. Is it right to make the nurserymen suffer for the delinquencies of the fruit grower? I say most decidedly, no! We will have able papers presented to us on this subject, so I will confine myself to a few brief recommendations for your consideration.

The Commissioner of Horticulture must be regarded as your friend, not your enemy.

Everything should be done to have this position filled by competent men.

Rigid inspection of nursery stock at the point of shipment and delivery should be encouraged and not discountenanced.

A closer relationship should exist between the nurserymen and commissioners so that their combined influence will prevent the introduction of new pests, and to compel negligent orchardists to keep their places cleaned up.

ETHICS OF THE BUSINESS

What are, after all, the essentials to success? Briefly as follows:

Trees must be true to name.

They must be well grown.

They must be free from pests.

They must be well packed to insure their safe arrival at destination.

Is this all? No. A discriminating public must be called upon to buy the stock on which you have bestowed so much care and attention, either through catalogues and advertising, or through agents. All of this means a vast expenditure of money. No one present here will deny that this is an actual statement of facts. Then why is it that the purchasers of nursery stock should have the general impression that it costs nothing to grow trees, and why should the nurseryman further promulgate this idea by the reprehensible practice of agreeing to replace stock—free of charge—that fails to grow? I hope that the members of this association will continue to bear in mind that such practices not only cheapens them in the eyes of the public, but detracts from the general tone of the business. Never forget the fact in determining the prices of your product to the planter, that the prices are not regulated by the cost of production, but by whatever stocks are in demand. You all know that such trees as you fail to sell are valueless and serve no other purpose than so much brush for firewood.

ADVERTISING

No one will deny that this is a subject worthy of consideration by every businessman and the nursery business is no exception to the rule. No definite rule can be laid down as to what course to pursue. We must concede that if other lines of business derive profits from money expended in this direction to create a demand for their goods, there is certainly a field open to the nurserymen. Bear in mind above all things, that your success in securing results from your advertising is dependent on your fulfillment of the statements you make in your advertisements.

A good catalogue giving the actual facts relative to what you have to offer and with attractive illustrations, has an important influence on the prospective purchaser's mind. The only possible way of determining what results you are securing from your advertising is to have a check system to keep you in touch with the newspaper bringing in the best returns. Without some such plan as this you might be devoting large sums of money to the very paper bringing you in the smallest number of inquiries. Regard your advertising just as you would any other business transaction; in other words, you are buying publicity for your business on the same principle that you would expend on any other class of merchandise. Do not be discouraged because the returns for your expenditures are not up to your expectations, for it is only by constant and persistent advertising, increasing the size of your ads as your business warrants, that you may expect to keep the name of your firm before the public. Whenever you have reached a period in your career that your business is so generally recognized by the purchasing public that you require no more publicity, retire before disaster overtakes you.

SECRETARY HALL'S REPORT.—The annual report of the American Association of Nurserymen is off the press. Mr. Hall with characteristic energy has bought out very promptly a well printed document of great interest to all nurserymen. All growers should have it.

AUSTRALIAN PROGRESSIVENESS

In accordance with the progressive immigration policy of the Commonwealth Government of Australia, we notice that instructions were recently given by the Department of External Affairs to the *Horticultural Press* of Australasia, 44 William Street, Melbourne, Victoria, Australia, to forward a special issue of their fruit magazine, *The Fruit World of Australasia*, direct to the farmers and fruit growers of Great Britain. This is the third time the Commonwealth Government has approached the English producer direct, through *The Fruit World of Australasia* with the result that many of the right class of immigrants have come to Australia. All the States have received considerable benefit, as settlers, after reading the practical articles dealing with the several states, have made their homes accordingly, and in so doing have brought considerable capital with them.

We hear that immigrants have arrived from the various counties, Kent, Somerset, Devonshire, etc., through *The Fruit World* many of whom in the past few months have voluntarily testified to the value of having received in their own homes in Great Britain a copy of that publication. There cannot surely be any more direct and convincing way to attract the right class of settler than this. It shows that there are good live men administering affairs in Australia. The illustrations of the issue just published depict various orchard and fruit scenes typical of Australian conditions. There is also an illustration showing the sturdy type of settler Australia is receiving from England and the United States of America.

Correspondence

THE PUBLICITY MOVEMENT

July 13, 1911.

Editor NATIONAL NURSERYMAN:

I am just in receipt of the July number of your publication, and I am greatly surprised to note its failure to record a very important action of the recent convention of the American Association of Nurserymen at St. Louis—the unanimous adoption of resolution offered by the undersigned as a substitute for that portion of the report of the committee on president's address which referred to publicity.

The resolution in question placed the association on record as of a contrary opinion to the committee in its assumption that the finances of the organization do not permit a satisfactory publicity campaign at the present time and transferred the further consideration of the matter from the executive committee as the report advised to a special committee of seven to be appointed by the president and instructed to make an exhaustive investigation of the subject by the time of the next convention.

The resolution further provided, if I correctly recall, that this special committee shall take the place, for the coming year, of the regular committees on publicity, trade opportunities and trade co-operation—and that the funds at present in the hands of the publicity committee shall be available for such necessary expenses as may be incurred in

the investigations by the special committee. Unfortunately, I offered the resolution from the floor of the convention without having taken the precaution to put it on paper. I have no doubt that the secretary's minutes have it properly worded and would suggest that you obtain a copy and publish it in the next issue of the NURSERYMAN. As, perhaps, the most significant action of the Convention, it seems to me that the adoption of the resolution should have proper notice in the official organ of the association—regardless of whether or not it may have met the approval of the editor.

Yours very truly,

JEFFERSON THOMAS

[NOTE: This action of the Association was overlooked. We are glad to call attention to it. The opportunity for a well directed publicity movement in the interests of the Association is excellent.—EDITOR.]

LIGHTNING'S FREAKS

Mr. Fred. Green, formerly L. Green & Sons, Perry, Ohio, but who started a nursery at Farmville, Va. about two years ago, after closing out the Perry place, writes as follows:

"Just met with a little bad luck here Friday night. I had a very fine new barn which I built since I came here, all well connected with sheds of all kinds, it was struck by lightning and burned to the ground, killing two of my best horses and burning up a large lot of stuff of all kinds, so have been a little confused here for the last two or three days, but will be straightened out again in a few days."

fruit and plant Notes

TREE SURGERY

The interest which is being awakened in connection with the care and surgical treatment of shade trees is being reflected to a considerable degree in similar type of effort directed towards fruit trees. It often occurs that a valuable and productive specimen in the orchard is being destroyed by a form of disease which appears from a superficial examination to be fatal in the natural course of events. A closer study of the subject occasionally reveals the possibility of saving such a subject by the application of rational surgical methods.

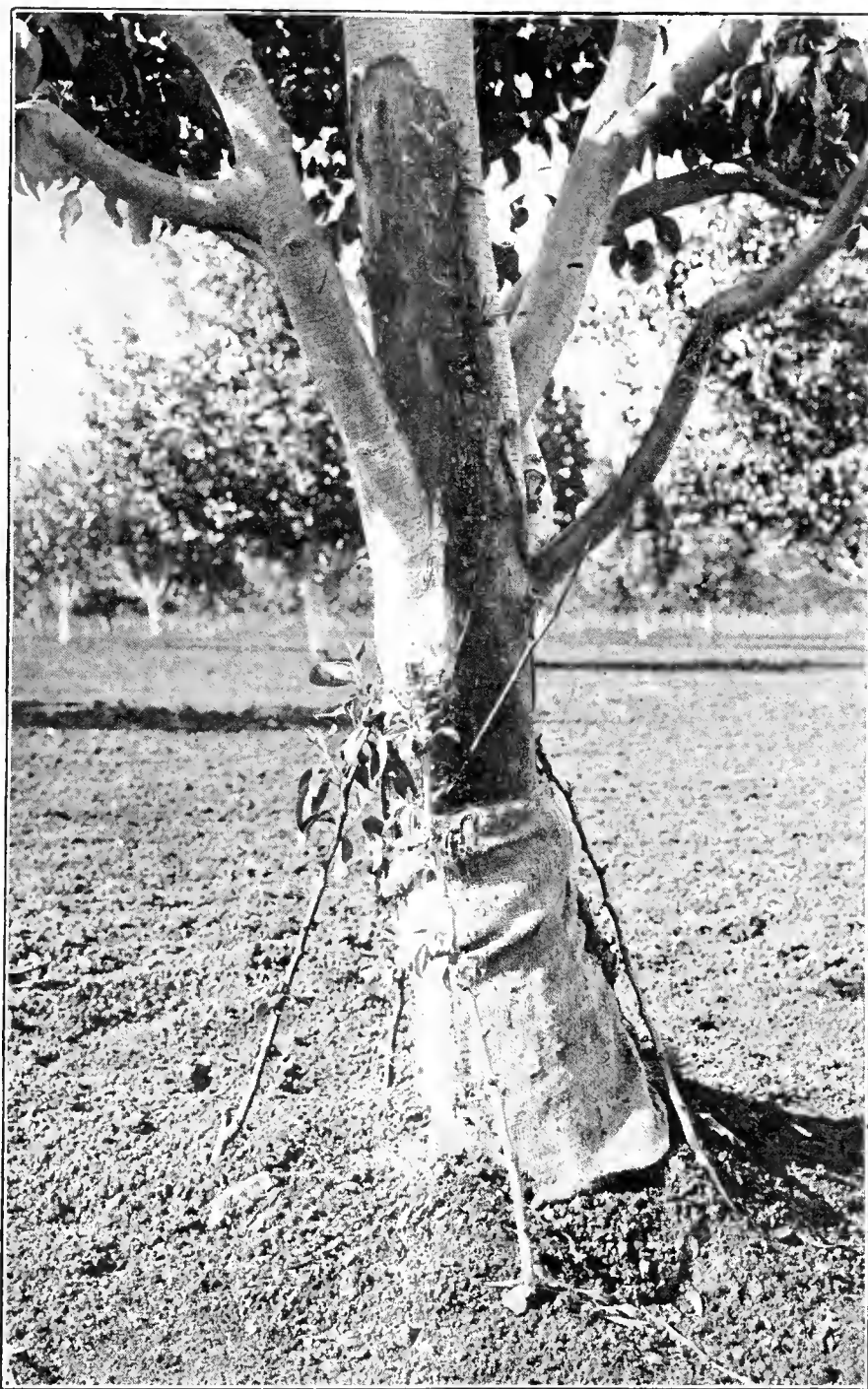
In the East the King apple and some other varieties are

notably susceptible to injury by a disease known as collar rot, which working insidiously and continuously, finally engirdling the tree, destroys life. Such diseases are susceptible of surgical treatment at the hands of the plant doctor.

Again, productive specimens of pears and apples are affected in stem and main branch by canker forms of blight which, if untreated, split or destroy the trees.

The rational forms of treatment entail the cutting out of all diseased tissue, baring the inner wood, and depending upon the subsequent growth of the tree to cover this by healing. The various methods of grafting by approach and

inarching are methods worthy of careful consideration. The accompanying illustration shows how a valuable pear in an orchard on the Pacific Coast, affected by a cankerous form of blight which practically engirdled the stem, was saved by planting auxiliary grafts near the base and inarching these above the affected portion. In the same way wounds may be bridged over. Almost every year we have our epidemic of mice and rabbit girdling, resulting in the loss of large and valuable trees, and this note is inserted for the purpose of calling attention to the whole question of tree surgery and the very large opportunity it offers in that individual and careful type of orchard management which brings the largest return to the operator.



Bridge Grafting used to save a tree affected with Body Blight.

Business Movements

MR. W. C. BARRY MEMBER OF STATE FOOD COMMISSION

The NATIONAL NURSERYMAN congratulates Governor Dix on the appointment of the well known senior member, Mr. W. C. Barry, of the firm of Ellwanger & Barry as a member of the food investigating commission. His co-workers are the Commissioner of Agriculture, the State Health Commissioner, Dean Bailey, Dr. Jordan and Frank N. Godfrey, master of the State Grange. The commission is authorized by legislative act to inquire into the purity, prices, production, distributing and consumption of food stuffs and farm products and to recommend remedial legislation to the legislature next year.

INCORPORATED

SAN BENITO, TEX.—The San Benito Semi-Tropical Nursery has been incorporated with a capital stock of \$1000. The incorporators are J. C. Miller, J. George Bowyer and M. W. Jones.—*Florists' Exchange*.

APPROVAL

The May issue of the NATIONAL NURSERYMAN is a splendid one. The paper is doing excellent work for the trade and the spirit which permeates it is ever working to help bring about a change for advancement of nursery work.

I greatly enjoyed Mr. Harrison's talk, or rather sermon, on peonies and iris and other flowers at the Denver Convention last June. May he be spared in health and strength for many years.

Don't miss the annual report of the American Association with full account of St. Louis meeting. Apply to John Hall, Granite Building, Rochester, N. Y.

Exhibitions

INDIANA APPLE SHOW

Under the auspices of the Indiana Horticultural Society an important apple show will be held in Indianapolis, Nov. 6-11, 1911.

The premium list will cover fruit in barrels, boxes, trays and plates. There are also premiums for county exhibits and individual bearing orchards.

The officers of the show are E. R. Smith, president, Indianapolis; C. N. Lindley, vice-president, Salem; C. G. Woodbury, secretary, LaFayette; J. M. Cravens, treasurer, Madison; Dr. H. E. Barnard, committee on arrangements, Indianapolis.

Boxes and trays may be obtained at any time before the show from W. B. Flick, Lawrence, Indiana.

APPLE CONGRESS AND EXPOSITION FOR DENVER

A plan is being worked upon that will bring the next session of the American Apple Congress to Denver to be held in connection with a National Apple Exposition. The dates most favored for the holding of this great combined feat is the week of November 6 to 12. Under the proposed plan an exposition association will be organized with a capital of \$50,000. Both the Congress and the Exposition Association are to be incorporated under the laws of the State of Colorado.

Invitations have been received by the Congress from several large cities to have the next meeting held with them. Almost all these have "backed up" when informed by the Executive Officers what sum of money will be required to bring them the meeting. Denver seems to be the only city that is willing to take hold of the proposition and see it through. One apple show, held in Denver, was an entire success. While there was a small loss, the benefits to the city and the apple industry were of untold value.

The Exposition Association will be organized by prominent Denver people and fruit growers. A contract will be entered into by the Apple Congress and the Exposition Association whereby mutual benefits will be derived and a most profitable arrangement perfected. The plan has the approval of all who have been consulted in the matter by

Clinton L. Oliver, Secretary of the Congress, and the entire details will soon be made public.

The season has now arrived when the apple crop conditions are considered settled and the apple growers are anxious to demonstrate what their various sections can produce. A show such as is proposed will be a wonderful drawing card for growers and dealers and as no show is more beautiful than an apple show, the attendance, in a city like Denver where one show has been held and the people got a taste of it, will be assured.

TO APPLE GROWERS

CHALLENGE FROM DELTA CO. COLORADO

Know All Men by These Presents,
Witnesseth:

That it being common knowledge throughout the land that the Western Slope fruit district of the commonwealth of Colorado is the richest and heaviest producing fruit area for its acres in these United States;

Therefore,

In order to settle for all time before the eyes of the world, the supremacy of the Delta County fruit district of the Western Slope, the undersigned organization, being an association of the commercial and financial interests of the said Delta County, Colorado, does hereby

CHALLENGE

any county in these United States, to equal its record of shipment of deciduous fruits produced during the season of A. D., 1911.

And in further evidence of its good intents and purposes in the issuance of the said challenge, there has been placed on deposit in the Delta National Bank of Delta, Delta County, Colorado, the sum of \$100.00 in gold as a forfeit to be paid to the county meeting the conditions of the said challenge. Any county desiring to compete shall post a like forfeit, the fund to be used by the American Apple Congress in the purchase of a trophy, or trophies, and awarding prizes to the contestants.

The Delta County and all other counties taking part in this contest, shall prepare and submit its evidence of shipments of deciduous fruits for the season of 1911, consisting of freight and express receipts and way-bills and other admissible evidence, to a committee of three to be appointed by the executive committee of the American Apple Congress with offices at 245 Equitable building, Denver, Colorado.

In consideration of the fact that the American Apple Show is to be held at the Denver Auditorium on November 20-25, it is hoped that all counties will take notice and be prepared with their contesting evidence in good season, in order that said decision may be rendered on or about the dates of said Apple Show.

With malice towards none and best wishes to all counties desirous of meeting our record in competition, we have caused our corporate name to be signed by our president, and the above covenants to be attested by our secretary this 15th day of June A. D., 1911.

THE DELTA COUNTY BUSINESS MENS' ASSOCIATION,

Attest

ROY L. EMRY, President.

Alice I. Kinsley, Secretary.

PROGRAM OF THIRTEENTH ANNUAL MEETING

SOUTHERN NURSERYMEN'S ASSOCIATION

Greensboro, N. C., August 23, 24, 25

Officers: W. A. EASTERLY, President, Cleveland, Tenn.; AUBREY FRINK, Vice-President, Winchester, Tenn.; A. I. SMITH, Secretary-Treasurer, Knoxville, Tenn.

STATEMENT BY SECRETARY SMITH

The Southern Nurserymen's Association was organized in Chattanooga, Tenn., thirteen years ago, by a few energetic Nurserymen, and has never missed an annual session. Its annual meetings have been held in various cities throughout the South. The object of this Association is to bring together the Nurserymen of the South for a discussion of all questions of interest to Southern Nurserymen, and the trade at large, to exchange ideas, learn from each other what we can, and help to solve the knotty problems which confront us all. This Association has accomplished much good for the Southern Nurserymen, and it is the earnest wish of its officers that its usefulness will increase with age. The State Entomologists interested in the work of this Association are always invited to meet with us and take part in the discussions. Short practical talks by practical men, and open and free discussions of all topics of general interest characterize these meetings. We have no stenographer and print no minutes.

Annual dues of two dollars (\$2.00) should be forwarded to A. I. Smith, Secretary and Treasurer, Knoxville, Tenn.

The following program was carried out: Invocation, Rev. E. K. McLarty, Greensboro, N. C.; Addresses of Welcome, Thos. J. Murphy, Mayor of Greensboro, R. C. Hood, President of Chamber of Commerce; Response, J. C. Hale, Winchester, Tenn.; President's Address, W. A. Easterly, Cleveland, Tenn.; No. 1.—The Pecan and Its Possibilities, C. F. Barber, MacClenny, Fla.; No. 2.—Fraternity Among Nurserymen, Chas. T. Smith, Concord, Ga.

How May Southern Nurserymen Increase the Demand for Ornamental Stock of all Kinds?, R. C. Berckmans, Augusta, Ga.; Address, Prof. W. N. Hutt, State Entomologist, Raleigh, N. C.; Report of the Secretary-Treasurer; Appointing of Committees.

Wednesday night, Meeting of the Southern Nurserymen's Protective Association.

Thursday morning, August 24th, No. 4.—The Advantages of Fall Planting of Fruit Trees and Plants in the South, W. F. Heikes, Huntsville, Ala.; No. 5.—Need of Uniform Prices on the Same Kinds and Grades of Trees, Harry Nicholson, Winchester, Tenn.; Address, Prof. E. R. Lake, Washington, D. C.; Assistant Pomologist, U. S. Department of Agriculture; No. 5.—Preparation and Fertilization of Our Soils, Jno. A. Young, Greensboro, N. C.

ENTERTAINMENT

There was an automobile ride, first to Jno. A. Young's place to see his Nursery and Shetland Ponies, thence to Pomona to visit the J. Van Lindley Nursery, returning to Greensboro for supper.

Adjourn at 4:00 P. M. to witness a ball game at park between Winston-Salem and Greensboro, followed by a car ride over the city.

Thursday night, 8:00, No. 6.—Better Prices for Our Trees, J. C. Miller, Rome, Ga.; No. 7.—Packing, W. T. Hood, Richmond, Va.; No. 8.—Apple Growing in the Mountains, O. Joe Howard, Pomona, N. C.

Reports of Committees, No. 9.—Revising Plate Books to Suit Territory, J. Marvin Miller, Winchester, Tenn.; No. 10.—Nursery Problems of the Future, Henry B. Chase, Huntsville, Ala.; General discussion of questions remaining in question box.

QUESTION BOX

Which are the two most profitable peaches ripening before Carmen, for planting by commercial orchardists?

Which are the two most profitable early apples ripening before Red Astrachan?

Why are we failing to grow plum?

Reports and suggestions concerning the labor question.

Should landscape architects be entitled to trade rates?

Do we, as Nurserymen, protect prices as they should be, and are not some too indiscriminate in making prices with a view of making sales?

Mayflower Peach: did it withstand the freeze Spring 1910 as well as other early peaches?

Report of range of general productiveness of Mayflower peach.

Arp Beauty Peach, is it recommended for commercial planting outside of Texas?

What can you say about Aphison apple?

Do we propagate too many varieties?

Should retail Nurserymen encourage the sale of one-year apple?

Do we, as Nurserymen, encourage the development of the great Appalachian Apple growing region as we should?

THE MEETING

The members of the Association were welcomed by Mayor Murphy.

He declared that the nurserymen of the south and right here in Greensboro, men like J. Van Lindley and John A. Young are doing more to build up and advertise their sections than any other class of business men.

MR. SMITH RESPONDS

Charles T. Smith, of Concord, Ga., responded in behalf of the nurserymen. Mr. Smith expressed appreciation for the kindness of Mayor Murphy, stating that in waiting so long to meet in Greensboro, they had done so with the intention of saving the best for the last. Mr. Smith also paid a high tribute to J. Van Lindley and the example he has set to the nurserymen of this state and the south during the half century that he has been in the business. Mr. Smith declared that he had just been considering the advisability of suggesting Greensboro as a permanent place for the annual conventions, that he had attended every one of the 13 sessions that have been held by the association, but nowhere had he witnessed so general a spirit of hospitality as accorded by the citizens of Greensboro.

President Easterly's address was instructive and suggestive. He called attention to several important features.

"The first of these I would mention is the policy of replacing stock at less than full value. This question has been before this association before, and I trust will have due consideration at your hands, and hope that you will determine what is the best for us to pursue. If its practice is conducive to a greater confidence between the nurserymen and the planter, if from every view point its influence is good, if it is right from principle and is making us money, it should be continued; if not, we should have the courage to abolish it. I believe that the principle of a thing is either good or bad, and believe in dealing with it along these lines.

"Another important subject which should have your consideration, is 'Standard of Uniform Grades,' or a more uniform description by grades than now in vogue. In no branch of industrial activity are standards of greater necessity than in the nursery business. A No. 1 tree undefined may mean one thing to one man, and a very different thing to another grower. Unless some fixed standards or descriptions are adopted to define qualities of nursery stock, how shall we decide that a given grade represents a No. 1 tree? It is certainly most this indefiniteness as to what a No. 1, 2 or 3 tree represents, which is responsible for many misunderstandings arising between nurserymen in their dealings. The ideals of one nurseryman may be graded up high, while those of another was relatively low as to what constitutes a certain grade. I believe that much of this sort of misunderstandings could be obviated by establishing descriptions which would more clearly define grades of nursery stock. For more complete plans for the standardization of grades I would call your attention to the papers read before the American association at St. Louis by W. F. Heikes, of Alabama, and E. P. Bernardin, of Kansas, and also the actions taken by the Western and Pacific Nurserymen's associations.

GENERAL DISCUSSIONS

Following President Easterly, papers were read by C. F. Barber, of McClenny, Fla.; Charles T. Smith, of Concord, Ga.; and R. C. Berekmans, of Augusta, Ga. Mr. Barber discussed the interesting question of "Pecans and Their Possibilities," showing the great value of the pecan today and predicting that in time its value will be greatly enhanced if the tree is given the proper care and environment. "To the coming generation," said Mr. Barber, "the value of the pecan as a food product, a shade tree, and an ornament will be inestimable." A free discussion, in which many questions were asked and answered, followed the paper read by Mr. Barber, intimating the great interest exhibited in this tree by the nurserymen.

"Fraternity Among Nurserymen" was the subject of Mr. Smith's talk. He stated that the interchange of ideas and thoughts that had been made by the nurserymen during the 13 years of their organization was largely responsible for the ever increasing prosperity and success of the members of the association, and that indications point toward even a brighter future. He desired that the fraternity spirit be promoted and the nurserymen be brought closer to each other.

R. C. Berekmans gave an instructive talk on "How the Southern Nurserymen May Increase the Demand for Ornamental Stock of All Kinds." Mr. Berekmans said that shade or ornamental trees should be planted not with the sole consideration in mind of their beauty, but of their adaptability to the soil. "The nurseryman," he said, "should know the soil in his section and should make it his duty to advise his customers as to the best trees for the respective soils."

E. G. Hill, of Richmond, Ind., a prominent member of the Northern Association of Nurserymen, and one of the leading rose growers in the United States, made a short personal talk to the delegates. He advised them to make establishments attractive and as pretty in appearance as possible, otherwise the neighboring people would not be so likely to ornament their yards and parks with his products. At the conclusion of Mr. Hill's talk the meeting was adjourned for dinner.

THE AFTERNOON SESSION

The afternoon session was called to order by President Easterly at 2 o'clock. The session was given over almost entirely to an address by Professor W. N. Hutt, state horticulturist, of Raleigh. Professor Hutt gave a highly instructive talk, using young trees on exhibition to show more plainly the points carried out in his lecture. The annual business report of the association was made by secretary A. I. Smith, of Knoxville, Tenn., after which the meeting adjourned in order that the visitors might attend the baseball game between Greensboro and Winston-Salem as the guests of the local nurserymen.

The following prominent Southern Nurserymen attended the Greensboro convention: W. A. Easterly, president, Cleveland, Tenn.; Aubrey Frink, vice-president of Winchester, Tenn.; A. I. Smith, secretary-treasurer of Knoxville, Tenn.; R. C. Chase, of Huntsville, Ala.; A. A. Newsom, of Knoxville, Tenn.; J. C. Hale, Winchester, Tenn.; C. J. Griffin, Jacksonville, Fla.; C. F. Barber, McClenny, Fla.; W. T. Wood, Richmond, Va.; C. T. Smith, Concord, Ga.; R. C. Berekmans, Augusta, Ga.; J. C. Miller, Rome, Ga.; W. F. Heikes, Huntsville, Ala.; Prof. E. R. Sake, Washington, D. C.; Harry Nicholson, Winchester, Tenn.; Prof. W. M. Hutt, State Entomologist, Raleigh; Messrs. John Van Lindley, O. W. Howard, Paul C. Lindley, John A. Young of Greensboro and M. J. Reitzell of Liberty.

The convention selected Augusta, Ga., for the location of the meeting of the association next year, after which an election of new officers was held. E. W. Chatten, of Winchester, Tenn., was elected president; O. J. Howard, of Greensboro, vice-president; and A. I. Smith, of Knoxville, Tenn., was re-elected secretary and treasurer.

COMMENT ON SOUTHERN NURSERYMEN'S MEETING

The program was carried out in full except as erased. There was an attendance of 50 who gave close attention to the proceedings including the festivities. Papers were of interest and called forth full discussion. Visits to Van

Lindley and Young's were of much interest and the hospitality shown greatly enjoyed.

Next place of meeting is Augusta, Ga. Officers: E. A. Chattin, president, Winchester, Tenn.; O. J. Howard, vice-president, Pomona, N. C.; A. J. Smith, sec-treas., Knoxville, Tenn. The success of the convention was due in no slight degree to the efficient work of the secretary.

JOHN C. CHASE.

MAINE LICENSE LAW

TO THE MEMBERS OF THE ASSOCIATION DOING BUSINESS IN MAINE:

At the St. Louis Convention the Legislative Committee was instructed to bring a test case in connection with the State of Maine Law requiring a license fee of \$10.00 for each salesman operating in the state.

Steps have been taken to start such a test case by sending an agent with our attorney to the Commissioner of Agriculture, stating that the law had been violated, and that the agent was ready to be arrested.

The Commissioner of Agriculture declined to arrest him, and the Attorney General claimed to have no authority in the matter.

It is evident that the Maine authorities have very little faith in the validity of their law. It is further evident that they plan to get as much money as they can in the way of license fees by threats of prosecution, and stop there.

It is the opinion of our attorneys that no attention should be paid to the law, that your agents should be instructed to decline to pay the license fee, and if arrested should communicate by wire at once with Thaxter & Holt, Attorneys at Portland, Maine, who are acting for the Association, and will be prepared to defend any case arising at any point within the State of Maine; thus, if an arrest is made a test case will be immediately started, but I do not believe that any attempt will be made to enforce the law. If your agents get into trouble have them communicate as above, and I wish you would also advise me.

WM. PITKIN,
Chairman Committee on Legislation.

ANNUAL REPORT BY SECRETARY HALL

The report of the St. Louis convention has just come from the press. John Hall, secretary, is noted for his promptness. As usual the report is a good one. All nurserymen should have it. Fuller notice in next issue. Write John Hall, Secretary American Association of Nurserymen, Granite Bldg., Rochester, N. Y.

The storehouse and packing building of the New England Nurseries, Bedford, Mass., were destroyed by fire Aug. 26, causing a loss of \$10,000, more than half of which was on growing plants and stock in storage. The adjoining buildings were saved by the work of the firemen.

The Central Nursery & Floral Co., of Kalamazoo, Mich., has retired from business.

Obituary

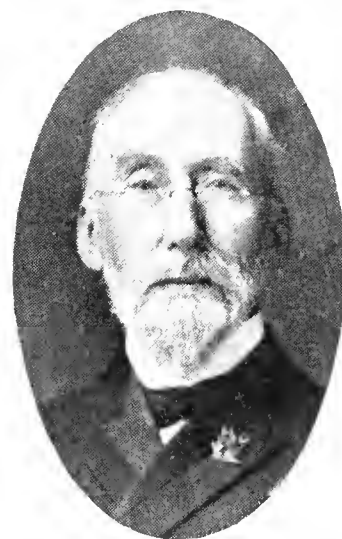
MRS. WILLIAM H. MOON

Mrs. William H. Moon, wife of the well-known nurseryman of Morrisville, Pa., died on July 22. She was a sister of Mrs. Walter P. Stokes.

W. F. HEIKES

Major W. F. Heikes, of Huntsville, Ala., manager and founder of the Huntsville Wholesale Nurseries, died suddenly at Cleveland, O., August 25, 1911. Major Heikes had been in Chautauqua, N. Y., with his family on a visit for the last few weeks and from Chautauqua he went down to Cleveland, where he was taken ill.

Mr. Heikes came to Huntsville about thirty-seven years ago and was known among its most substantial citizens, being manager of the Huntsville Wholesale Nurseries, which are the



pioneer nurseries of that section. Mr. Heikes came from a family of nurserymen. Andrew Heikes began the nursery business at Carlisle, Pa., in 1798; his son, George Heikes, on moving to Dayton, O., established a nursery in 1822. Jacob Heikes, a son of George Heikes, established himself in the nursery business near Dayton in 1839; and W. F. Heikes, son of Jacob Heikes, succeeded him in the business at the same place in 1866, and in 1882 founded the Huntsville Wholesale Nurseries. The death of Mr. Heikes is sadly felt by the trade as it leaves vacant the office of president of the Alabama State Horticultural Society, a position to which Mr. Heikes was re-elected at the last meeting.—*Florists' Review*.

McGlennon & Kirby Co. of Rochester, N. Y., has been incorporated. They will do a general nursery business. Capital stock, \$50,000.

The Oregon Nursery Co. has filed suit in the district court at Hillsboro against George A. Bradburn, of Roseburg, asking \$20,000 damages for alleged false statements regarding the nursery stock of the plaintiff. The statements in question were published in a Portland Daily June 26, 1910, and the article, which forms part of the complaint filed, was in the form of an interview with Mr. Bradburn, who in the published statement is quoted as saying that the trees were affected with anthracnose. The complaint states that such charges are injurious to the company's business.—*Florist Review*.

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The only trade journal issued for Growers and Dealers in Nursery
Stocks of all kinds. It circulates throughout the United States,
Canada and Europe.

Official Journal of American Association of Nurserymen

AWARDED THE GRAND PRIZE AT PARIS EXPOSITION, 1900

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Six months,75
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or postal orders, instead of checks, are requested by the Business Manager, Rochester,
N. Y.
Correspondence from all points and articles of interest to nurserymen and horti-
culturists are cordially solicited.
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ROCHESTER, N. Y., SEPTEMBER, 1911.

AWERICAN ASSOCIATION OF NURSERYMEN

PRESIDENT—J. H. Dayton, Painesville, Ohio; vice-president, W. H. Wyman, North
Abington, Mass.; secretary, John Hall, Rochester, N. Y.; treasurer, C. L. Yates,
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Ohio; John Hall, *Ex-Officio*, Sec'y, Rochester, N. Y.
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TARIFF—Irving Rouse, Rochester, N. Y.
LEGISLATION EAST OF MISSISSIPPI RIVER—Wm. Pitkin, Rochester, N. Y.
LEGISLATION WEST OF MISSISSIPPI RIVER—Peter Youngers, Geneva, Nebr.
CO-OPERATION WITH ENTOMOLOGISTS—L. A. Berckmans, Augusta, Ga.
PROGRAM—C. J. Maloy, Rochester, N. Y.
EXHIBITS—A. E. Robinson, Bedford, Mass.
ARRANGEMENTS—John Hall, Rochester, N. Y.; W. H. Wyman, North Abington, Mass.;
H. P. Kelsey, Salem, Mass.
ENTERTAINMENT—J. Woodward Manning, North Wilmington, Mass.
PUBLICITY AND TRADE OPPORTUNITIES—W. P. Stark, Louisiana, Mo.; Jefferson
Thomas, Harrisburg, Pa.; Orlando Harrison, Berlin, Md.; C. M. Griffing, Jackson-
ville, Fla.; G. C. Roeding, Fresno, Cal.; H. D. Simpson, Vincennes, Ind.
ROOT-GALL—E. A. Smith, Lake City, Minn.

STATE AND DISTRICT ASSOCIATIONS.

American Nurserymen's Protective Association—President, J. W. Hill, Des Moines, Ia.;
secretary, Thomas B. Meehan, Dreshertown, Pa. Meets annually in June.
American Retail Nurserymen's Protective Association—President, Charles J. Brown,
Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in
June.
Association of Oklahoma Nurserymen—President, J. A. Lopeman, Enid, Oklahoma;
secretary, C. E. Garee, Noble, Oklahoma.
Canadian Association of Nurserymen—President, E. D. Smith, Winona; secretary,
C. C. R. Morden, Niagara Falls, Ont.
Connecticut Nurserymen's Association—President, C. W. Atwater, Collinsville, Conn.;
Secretary, John S. Barnes, Yalesville, Conn.
Eastern Association of Nurserymen—President, Wm. Pitkin, Rochester, N. Y.;
secretary-treasurer, William Pitkin, Rochester, N. Y. Meets annually in January.
National Association of Retail Nurserymen—President, E. S. Osborne, Rochester,
N. Y.; secretary, F. E. Grover, Rochester, N. Y.
National Nurserymen's Association of Ohio.—President, J. W. McNary, Dayton O.;
secretary, W. B. Cole, Painesville, O.
Pacific Coast Association of Nurserymen —President, P. A. Dix, Roy, Utah; secretary-
treasurer, C. F. Tonneson, Tacoma, Wash. Meets annually in June.
Pennsylvania Nurserymen's Association—President, Samuel C. Moon, Pa.; secretary,
Earl Peters, Mt. Holy Springs, Pa.
Southern Nurserymen's Association—President, W. A. Easterly, Cleveland, Tenn.;
secretary-treasurer, A. I. Smith, Knoxville, Tenn.
Tennessee Nurserymen's Association—President A. I. Smith, Knoxville, Tenn.;
secretary, G. M. Bentley, Knoxville, Tenn.
Texas Nurserymen's Association—President, J. B. Baker, Ft. Worth, Texas; secretary-
treasurer, John S. Kerr, Sherman, Texas.
Western Association of Nurserymen—President, Geo. A. Marshall, Arlington, Nebr.;
secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets annually second
Wednesday in December.

DEVELOP- MENT OF THE COAST REGIONS

We hear much about the expansion of
orchard regions on the Pacific Coast.
We are wont to hear less of development
in the antipodal section of the United
States or Canada. Notwithstanding this,
we should realize that progress is making steadily and
rapidly in the extreme eastern Atlantic region. Nova
Scotia exported 35,000 barrels of apples in 1893, and 750,000
in 1909. This promises to be only the beginning of what
is to come. An enthusiastic orchardist of that region
prophesies that in ten years the output will be doubled, and
in twenty years Nova Scotia will send over two to three
million barrels of apples to the European market every year.

Cooperation is developing among the fruit growers in
that section. A fruit shipping company was incorporated
some three years ago, and has been a success from the
beginning. Last year it handled over 20,000 barrels,
netting to the growers over \$45,000. All this is the evidence
of progress on the East Coast.

NUT CULTURE IN THE UNITED STATES

The past decade has seen marvellous
strides in the development of the nut
industry of the United States. The
walnut and the almond have been grown
with varying success upon the Pacific
Coast for say thirty or forty years past; but thus far they do
not represent great staple fruit industries. These two trees
are of foreign extraction and they do not seem to have found
that exact adaptation in the matter of soil and climate
needed for their successful growth in this country, for it is
only the most exact fitting into the needs of a plant of soil
and climatic conditions that makes for reliable production.
Probably greater success is promised to walnut culture in
the Northwest Pacific at the present time than ever before,
because of the introduction of some French varieties which
seem to have found a congenial home. This coupled with
better methods of orchard management gives the future a
more cheerful outlook.

The greatest single movement of any orchard develop-
ment feature in this country which has come under our notice
in recent years is seen in the remarkable strides which pecan
culture has made in the Gulf states. Years ago Mexico,
Texas and Louisiana were known and noted for their output
of seedling pecans. These were the regions which supplied
the markets of the north. But gradually the pecan area has
extended its borders and now these older sections are no
longer the dominant regions. New regions have appeared
as important rivals. The new era came with the selection
and propagation of the best of the native seedlings, and not
the least of the problems was the mastering of the art of
propagating this nut. This has been done and trees have
been made available in large quantities. But with the
knowledge of the high qualities of the pecan nut and the
possibilities of cultivating it in much of the cotton belt area
has come an unprecedented demand for trees which is still
in full swing. Texas and Louisiana are no longer the
orchard homes of the pecan, for North Florida and South
Georgia have sprung into prominence and great areas in
those regions have been planted to this rich and nutritious

native nut. This is in reality the southern hickory, but with the shell softened and the meat enriched with higher flavors if possible.

There are those who fear overproduction, but in our judgment the cry is not likely to be heard in our time. The nut is not perishable; it can be stored and shipped long distances. It is bound to meet with a strong demand and fill a large place in the dietary of the American people.

THE NUR- SERYMAN'S BURDEN

There is no question in our mind that the heaviest burden borne by the nurserymen of the country is the effort which he makes to keep in touch with the constantly increasing number of new varieties of fruits. A glance through current fruit catalogs reveals thousands of varieties, many of which are obsolete and many having only local repute. The labor of preventing confusion and mixing is enormous and with the greatest care possible, mistakes will occur. The most conscientious propagator is likely to meet confusion in his propagating-house, or in the field through the neglect or carelessness of more or less irresponsible employees.

This raises an important question. Should each nurseryman attempt to grow this apparently interminable list of varieties? Is not, on the other hand, the reputed unreliability of certain firms due to the misguided attempts to grow everything in the list? Is there any relief from this awkward situation? It would seem that there was. It would seem that nurserymen could control this situation to a large extent. They are in effect the makers of fashion in the matter of varieties. Can they not get together and agree upon standards in each class of fruits for certain districts? To a large extent such standards have been established by the American Pomological Society and by state horticultural societies. It does not seem thus that it would be more difficult to agree upon the propagation of certain standards than upon the sale of such at uniform prices. Perhaps the latter is a difficult thing to accomplish. There is no earthly use of growing more than a dozen varieties of peaches and what person or locality needs more than that number of pears or apples? The paper by Mr. Osborne of Rochester on this subject a year ago was timely and to the point. Let the Experimental Stations test the new aspirants for public favor; let them pass upon their merits and when one appears which worthily replaces an older kind of the same class let it be added, but make haste slowly in this respect and thus lessen the weight of this, the nurseryman's burden.

THE WORK OF THE ASSOCIATION

It has been generally agreed that the St. Louis meeting of the American Association of Nurserymen was an unqualified success. This was due in large measure to the good offices and general efficiency of the local committee, the executive of the Association and, we should not forget to add, the excellence of the program. In the make-up of the latter there were many important subjects touched upon, most of them of an intensely practical nature.

One of the difficulties with all association work is that in the nature of things it lacks continuity. New officers with new ideals and ideas come in and the policy and work of the association are deflected. The American Association of Nurserymen is fortunate, however, in that it has suffered comparatively little from this sort of thing and it has done splendid work through its committees. Notwithstanding this, there is much to be accomplished. Before speaking of this, it is gratifying to feel that the business of the Association passed at the last session from the hands of an executive of wide training into those of another who in the conduct of his own affairs and the large enterprise with which he is associated has shown ability of an exceptionally high order. In Mr. Dayton the Association has secured an executive who is practical and will certainly prove efficient.

We trust that the more important movements which were gotten under way during the régime of Mr. Stark will be continued. Among these are the root gall experiments, the testing of state inspection laws, the working towards definite standards in the grading of trees, the elimination of unworthy and obsolete varieties and finally the establishment of a publicity propaganda which is effective and feasible. We are glad to call attention in this issue to the fact that the Association placed itself on record as favoring a thorough reorganization of its publicity work and the committee appointed by President Dayton is one which undoubtedly will work out a policy to the benefit and credit of the Association. These are a few lines of work which President Dayton will undoubtedly encourage in every reasonable way possible.

ANNUAL MEETING OF THE CONNECTICUT NURSERYMAN'S ASSOCIATION

This active Association celebrated its annual gathering on the grounds of the Elm City Nursery in New Haven, Conn., on July 26. The Association met in the same place and under the same auspices last year. The conditions for the meeting were all that could be desired. Recent rains had given a green and fresh expression to the herbage and the atmospheric conditions were exceedingly agreeable.

The interest of the meeting at this place was greatly enhanced by the display of rare Japanese plants which were personally collected by Mr. Ernest F. Coe, President of the Elm City Nursery Company during his travels in Japan last winter. The skill demonstrated by the unique growth and character of these plants and their large variety proved an educational feature of exceptional interest to the visitors.

The meeting partook of the nature of an outing during which the nursery tracts and the cultivated stock in its varying variety were studied. Leaving the nursery the members were carried in autos to the West Shore where a satisfying repast awaited them.

The meeting closed with a short business session following the dinner and all agreed that the 1911 outing was one of the most enjoyable and profitable ever experienced. It was the consensus of opinion also that the pleasure and satisfaction of the day was largely to be credited to the hosts of the occasion, the Elm City Nursery Company. (See frontispiece.)

ADDITIONAL REPORT FROM LEGISLATIVE COMMITTEE IN RELATION TO STATE LEGISLATION

Another matter that has come to the attention of your Committee is legislation in the State of Maine affecting nursery interests, and particularly nursery salesmen.

The law is modeled on the usual lines, requiring certificates to be attached to each package, and providing for power to inspect, etc., should it be deemed necessary.

A bad feature of the law is that it provides that each agent shall take out a license, and pay therefor a license fee of \$10.00. If the law were strictly enforced, this would mean that every nursery concern doing business in Maine must take out a license for each salesman to whom it might send an outfit, whether that agent does any business or none; an expensive proposition for nurserymen doing business in that state.

The law as far as it relates to license fees is plainly invalid, and it is the opinion of our attorneys that a test case could be successfully conducted, and therefore it is for this meeting to decide whether the association will authorize and back up such a test case. Your Committee would advise that a test case be brought.

* * *

The legislation in the State of Wisconsin has also been brought to the attention of your Committee. Under the Wisconsin law each nursery concern doing business in that state must take out a license, and pay a fee of \$10, and each agent must take out a license and pay a fee of \$1.

That law was enacted in 1909. Certain amendments of the law were introduced during the session of 1911, passed both Houses of the Legislature, but the bill has not been signed by the Governor, because it did not give him the power of appointment of the nursery inspector, but lodged that power of appointment in the Director of the Agricultural Experiment Station, and the parties pushing the bill, say that they prefer to work under the old law, rather than to have the change made in the power of appointment.

The same criticism applies to the license fee as stated in connection with the Maine legislation, even though the amount is small, and in many parts the law is invalid in the opinion of our attorneys.

It is the opinion of your Committee that a test case should be arranged in the State of Wisconsin, and before leaving home your Chairman endeavored to secure a promise from the authorities of each state that a test case would be arranged, but has had no reply up to this time.

It is presumed that there will be matters of legislation in the West presented by the other Committee, and it seems to your Committee that this entire subject should have careful consideration, and that a decision should be reached as to what should be done with these various laws, and a definite policy established. It does not seem wise to allow unjust, arbitrary, and discriminatory legislation to stand uncontested. If we submit to these matters, it means that even more drastic legislation will be enacted in the future, until the situation reaches a point where it will be impossible

for us to do business in a large number of states in the Union.

As an example of the foolish legislation that we are running up against, one of the provisions in the proposed Wisconsin amendment requires that all persons selling nursery stock in that state shall furnish the inspector with copies of all their literature printed or mimeograph, including catalogues, price lists, order forms, contracts, and agreements, furnished for the use of agents or customers.

Certainly that state has no authority under this law or any other one to prescribe a definite form of contract to be used between the nurseryman and his customer, or his agent, provided the contract is legal, and if they cannot prescribe a uniform form of contract, what benefit can it be if these matters are filed in that office?

This is simply an example of a lot of fool legislation that has gone on to the statute books during the past few years, and affecting the nursery interests. If we submit, we shall be constantly bothered. Will it not be better to outline a definite, fighting policy, and spend a little money and see if we cannot get these matters straightened out, and prevent similar foolish legislation in the future?

These subjects are offered for your consideration, and later your Committee proposes to introduce certain resolutions carrying out the recommendations herein.

WM. PITKIN, Chairman.

A resolution was adopted authorizing the President, Executive Committee and Legislative Committee to arrange for test cases in Maine, Wisconsin, Colorado, Montana and Wyoming.

FARMERS' INSTITUTE WORKERS

The next annual meeting of the American Association of Farmers' Institute Workers will be held at Columbus, Ohio, November 13 to 15, 1911. At the same place and beginning November 15 will be held the annual meeting of the Association of American Agricultural Colleges and Experiment Stations.

Notice is sent out thus early in order that Farmers' Institute Workers in arranging their work may have in mind the date of this meeting, and so arrange that it may be possible for all who are interested to attend.

JOHN HAMILTON,
Farmers' Institute Specialist.

"Do not feel that I can be without this excellent journal."

KALAMAZOO NURS.,

Mich.

L. P. THURSTON.

The NATIONAL NURSERYMAN:

Enclosed please find M. O. \$1.00 for one year's subscription to your valuable paper.

T. R. TOWNS.

Martin H. Musser of Lancaster, Penn., called at the office of the NATIONAL NURSERYMAN in the month of August.

INTERNATIONAL APPLE SHIPPERS MEET

The International Apple Shippers' Association held its seventeenth annual meeting in Detroit on August 9, 10, 11th. With an attendance worthily representative of the trade of our own country and Canada, the house was convened on Wednesday morning, with President W. L. Wagner in the chair for the fourth successive session. The visitors were warmly welcomed by the Mayor of Detroit, Hon. W. B. Thompson. After a response by Mr. W. W. Clarke of Owensboro, Ky., President Wagner read his annual address reviewing the work of the Association during the year just closing. The morning session was concluded after various business matters had received attention.

On Wednesday afternoon the reading and discussion of papers and the reports of committees were taken up. Among the papers read were the following:

Cold Storage—the Apple Industry from the Standpoint of the Dealer, E. C. Cook, Baltimore; Standardization, L. A. Fischer, Bureau of Weights and Measures, Washington; Auction for Apples, John Denney, Chicago; Legislation and Cold Storage of Food Products, W. G. Gibson, Chicago; Lessons of the Season of 1910-11, F. H. Simpson, Flora, Ill.

Working committees are a feature of the Apple Shippers' organization. The meeting was marked by the large number of reports by chairmen who had spent much time and energy in gathering material on their respective subjects. The Heyburn bill was closely watched as it went through congress and important modifications were secured. The LaFea bill is by no means dead and will be pushed to a finish. "Storage in Transit," "International Tariffs" and "Apple Show Premiums" were subjects of other reports.

No feature of a convention does so much to bring its members together as a banquet. The Detroit meeting was by no means behind in this feature and Secretary Phillips and Toastmaster Wiley were heartily congratulated on the success of the "spread and spouts."

The trade of Detroit came nobly to the front in entertaining the Shippers. Many of the members were accompanied by their wives who were cared for every moment. One afternoon was spent in an auto tour of the city.

The apple exhibit held in connection with the Detroit meeting was thoroughly representative of the different producing sections of the country. Over a thousand plates were on display by growers from England to Oregon and from Australia to Ontario. Wm. Dixon of Hamilton, Ontario carried off first premium with H. S. Duncan of Wallingford, N. Y., second.

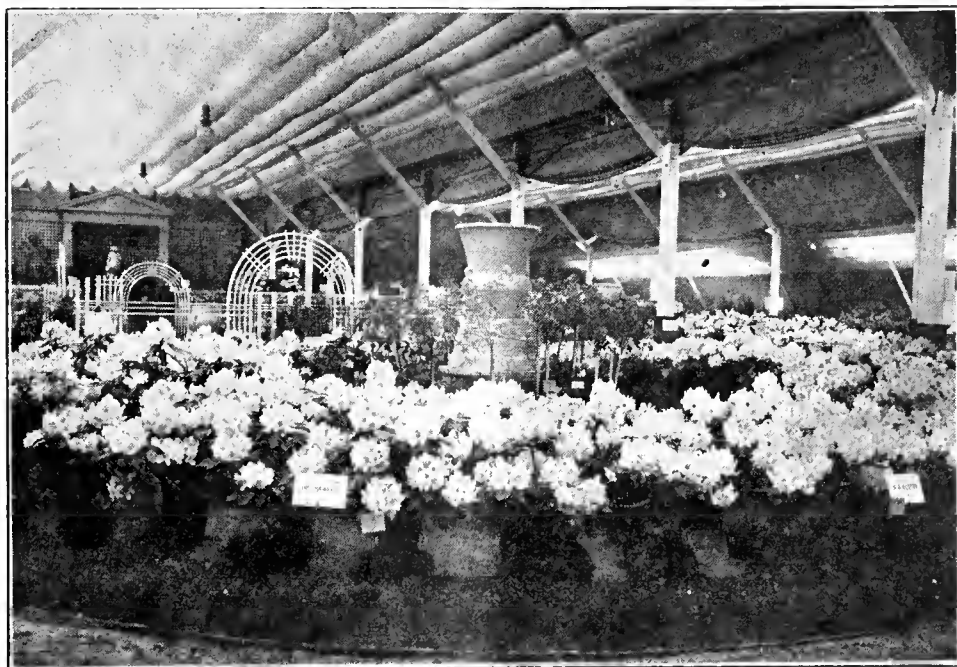
The officers for the ensuing year are as follows:

President, E. N. Loomis, New York; vice-president, W. H. Blodgett, Worcester, Mass.; treasurer, Wm. French, New York; permanent secretary, R. S. Phillips, Rochester. The next convention is to be held in Chicago.

VEGETABLE GROWERS' ASSOCIATION

The Vegetable Growers' Association of America is planning for a rousing meeting at Boston during the week of September 18. Boston boasts of probably the most progressive lot of market gardeners in the country and they are planning, under the leadership of H. F. Hall of Brighton, for royal entertainment of their visitors. Growers of Chicago, Cleveland and Ashtabula are laying plans for a special train for the trip which is to pick up "car lots" of growers along the line.

For years and years there have been special apple shows and flower shows and fruit shows but vegetables have usually been incidental. The Massachusetts Horticultural Society is this year to hold a vegetable show on an unprecedented scale during the week of the vegetable meeting. Over two thousand dollars in prizes are offered and they are so arranged that the inducements in the important classes are very strong. Competition is open to the world and Boston will be given a strong race for some of the money. P. W.



Rhododendrons, Pink and White Pearl, as seen at the recent flower show at Boskoop, Holland.

NORTHWEST FRUIT CROP ESTIMATED SHORT

C. W. Wilmore, who claims to have made a trip to leading fruit sections of the Pacific Northwest, writing in *Wenatchee World*, states the apple crop as a whole is short.

The Rogue River valley last year had a shipment of 350 cars of apples, but next fall will harvest only 35 per cent of a normal crop. Pears will make a full crop. In the Willamette valley the apple crop will run about 25 per cent normal and prunes are also very light. At Hood River and The Dalles, apples will yield about half a crop, possibly 60 per cent.

"Yakima is not hit so hard as was thought at first, but 1,000 cars of apples are the utmost to be hoped for. This is about 35 or 40 per cent normal. Yakima will have a full crop of pears and a hundred cars of prunes. Peaches are turning out better than anticipated, some orchards having a full crop, while others are almost barren. Walla Walla, Dayton and the Palouse valley will have 50 per cent of their usual apple crop.

All fruits in coast section of Washington, including berries, are also short of normal crop.—*North West Horticulturist*.

AMERICAN GLADIOLUS SOCIETY

The meeting of the American Gladiolus Society at Baltimore, August 16-17 was well attended and considerable enthusiasm was manifested over the progress of the society during its first year of existence. The society voted to establish the grades of gladiolus corms making the first grade one and one-half inch and up, and the second grade one and one-quarter to one and one-half inches in diameter. A bureau of registration for new varieties was also established and a committee named to formulate rules of nomenclature and to pass upon seedlings. A committee was also appointed to consider the preparation of a suitable color chart for the use of florists.

The exhibition of gladiolus blooms was very large and considering the dry season and extreme heat was of fine quality. John Lewis Childs staged a fine lot of flowers consisting of 114 varieties. Among the best of these were, Blanche, Dawn, Cardinal, Attraction, Sulphur King, etc. Arthur Cowee had a very extensive exhibit, which unfortunately was seriously damaged by delay of the express company while in transit. This was regretted by all for otherwise Mr. Cowee's exhibits consisted of high quality blooms faultlessly staged. The varieties of superlative merit in his collection were Peace, Meadowvale, White Cloud, La Luna, Philadelphia, Crackerjack and Faust.

B. Hammond Tracy staged Dawn, Independence, Maiden Blush, Mrs. Frances King, Sunrise. All the flowers were large on long spikes. Mr. Tracy exhibited a fine lot of seedlings also.

J. B. Hutchinson staged a collection of the new varieties of Wilhelm Pfitzer, Stuttgart, Germany. This exhibit was remarkable for the number of varieties of unusual color. Europea, Königen Charlotte, and Nephritis were among the most noteworthy. Kunderdi Glory, shown by several exhibitors was especially fine.

In the competitive classes John Lewis Childs secured the cup for the largest collection of named varieties, H. W. Kerner for best seedlings, and J. W. Pepper (W. Robinson, gardener) and Vaughn's Seed Store for vases of Kunderdi Glory.

The educational exhibit by the Department of Plant Pathology and lecture by Mr. Fitzpatrick of Cornell on Gladiolus diseases were very interesting and instructive.

Owing to the absence of Prof. Craig, due to illness, the report of the Committee on Nomenclature on the work accomplished at the trial grounds, Ithaca, N. Y., was read by Dr. A. C. Beal.

The officers elected are as follows: President, I. S. Hendrickson; vice-president, E. H. Cushman; corresponding secretary, L. Merton Gage; financial secretary, H. Youell; treasurer, Wm. Sperling. A. C. B.

PUBLICITY QUESTIONS

"Mr. Thomas moved as a substitute to report of committee on President's address that the President be authorized to appoint a special committee of seven, representing the various sections of the Association, to consider during the coming year the possibility of trade cooperation and the

extension of the influence and possibilities of the trade, and to report at the next convention as to the ways and means which might work out better things for the trade along these lines."—*Adopted.* JOHN HALL, Sec'y.

Note and Comment

COST OF GROWING A BOX OF APPLES IN WASHINGTON

G. C. Eikelberner takes serious exception to the statement of Peter Hovland as to the cost of producing a box of apples. Mr. Hovland's estimate was 86 cents. His figures were \$300 per acre for interest on the investment, rent, taxes, harrowing, cultivation, fertilizing, spraying, etc., with 36 cents additional for marketing expenses. Mr. Eikelberner in his estimate cuts out the expense of plowing, cultivating and fertilizing, holding that the growing of clover or some other cover crop in the orchard takes the place of fertilizing and makes the orchard more productive. His total estimate is about 61½ cents, divided as follows:

Eight per cent on \$2,000 valuation.....	\$160.00
Water rent.....	1.50
Taxes.....	10.00
Pruning (average).....	5.00
Brush hauling.....	1.00
Spraying.....	10.00
Irrigating.....	5.00

Total \$192.50

Figuring 600 boxes to the acre, this would make a total expense of about 32 cents. Added to the 32 cents are the marketing charges, as follows:

Packing.....	\$ 0.07
Hauling.....	.01½
Box, nails and making.....	.13
Paper.....	.02
Nailing.....	.01
Orchard hauling.....	.02
Picking.....	.03

Total \$0.29½

This makes a total expense of 61½ cents per box. P. W. Lawrence kept very careful track of his expenses this year and they amounted to 61 cents per box. Other growers have been making a careful estimate for years past, and it is safe to say that the cost of growing and marketing a box of apples ranges between 50 and 60 cents.—*Wenatchee World*.

BOX PACKAGE POPULAR IN SCOTLAND

In a report on fruit shipments to Glasgow during the past year, published in the June *Canadian Horticulturist*. Cargo Inspector James A. Findlay notes the favor with which apples in the box package are received in Glasgow. He says that the eye of the Scotchman must be pleased in order to tempt him to buy fruit, and he is particular about the eating qualities as well. Mr. Findlay calls attention to the short supply of apples received from Canada, and states that more barrel stock was imported from the United States as a result. Some 1600 boxes of fruit were received at Glasgow from British Columbia, which arrived in good condition, as was the case with most of the fruit imported. Prices were high on account of the shortage in quantity.

WHO SHOULD RECEIVE NURSERYMENS' TRADE LISTS

In Mr. A. E. Robinson's paper read at the recent meeting of the American Nurseryman's Association, much that is stated in reference to the use of catalogs, mailing lists, etc. will no doubt touch a responsive chord with the trade generally; as also the suggestion that trade catalogs, special prices, etc. should be sent only to those entitled to receive them.

Mr. Robinson's view, however, that no one excepting growers are entitled to the lowest prices and special prices under the present conditions of the nursery business, appears a little far-fetched, and, where followed by the trade, may—like the back firing action of the colored man's shot gun—produce directly the opposite effect from that desired.

True, if a florist, seedsman or dealer requiring but a limited amount of stock, and that in great variety, is placed upon the list of outer circle purchasers, little harm can come individually or collectively to the trade, but that those with an established business, who are large and constant cash purchasers and prefer to merchandise rather than grow this material, or nurserymen who grow in part and purchase the balance of their requirements, should be put in the same outer circle list we believe a wholly mistaken policy.

The responsible Merchant Nurseryman or concern, like the merchant in any other staple article, converts what is produced into cash, and, not being in direct competition in the trade as a grower, may in many instances be entitled to receive and does receive, as does every successful merchant in every other line of business, as good or in many cases better terms than the manufacturers or producers furnish other competing manufacturers or producers; and that this principle applies and results obtain now quite generally in this country and in Europe, and is mutually advantageous to the growers and trade generally, is beyond question. These are fixed and growing conditions and those who would ignore them may sooner or later add to the size of the unsold and the brush pile.

From a somewhat intimate knowledge of the nursery situation both in this country and in Europe, I find this to be the fact, and the numerous special quotations made by good and responsible growers to those large and responsible merchant nurserymen like this company, who are not growers themselves but handle nursery products largely for cash, indicates that there is a wide-spread view not in accord with Mr. Robinson's suggestion of classification in this respect.

Of course every one must recognize that any one handling

nursery material or other commercial material or products in large quantities is not only entitled to lowest prices or special prices but that this is of mutual advantage to the grower as well as the merchant.

We presume that Mr. Robinson is too wide awake a nurseryman and tradesman himself not to recognize the growing importance of the nursery business on a mercantile basis, and that those engaged in the business in this way are bound to have the best terms as to rates and quality of stock.

FRED'K W. KELSEY.

FRUIT PROSPECTS

Government bureaus, state horticultural societies and other organizations are attempting by various means to get an accurate estimate of the expected apple crop. These estimates are all more or less approximate. Canada: the reports gathered by the Ontario Fruit Growers' Association indicate that the staple varieties, as Baldwins and Greenings, will be light; Ben Davis and autumn varieties a fair crop;

pears, plums and grapes a full crop. Michigan: Baldwin and spy, light to medium; pears, a moderate crop; grapes, promising. Pennsylvania, winter and fall apples, full crop. Ohio, winter apples one-fourth of a crop. Virginia, winter apples about one-fourth of a full crop. Kansas, Missouri and Illinois, from 30 to 50 per cent of a full crop of winter fruit. Colorado, moderate crop of apples; large crop of cherries, which of course have been harvested. New England will produce a light crop of winter fruit. New

York promises about two-thirds of the average crop of winter apples and a little better than this of fall apples. On the whole it would appear that the winter apple crop was going to be shorter than last season.

MISSOURI'S FRUIT OUTLOOK

COLUMBIA, MO., Aug. 1.—The State Board of Horticulture is in receipt of special reports from correspondents in all of the counties of the State which show that the outlook for a good apple crop is still excellent. Taking the average condition of the entire State, the outlook for the apple crop has declined seven points, the present estimate being thirty per cent of a full crop. The peach situation remains practically unchanged, the present estimate being 28.2 per cent as against 29.2 per cent a month ago. Since a large number of these reports are based upon seedling peaches, the estimate will have to be cut in half. The outlook for grapes is excellent, the average for the State being seventy-five to eighty per cent. Blackberries and similar fruits were almost a failure except in the southwestern counties.

There is some complaint of drought injury but it does not seem to be serious. Unless there are heavy rains apples will be smaller than usual



Rhododendrons, Lilacs and Azaleas at the recent flower show in Boskoop, Holland

but the color and quality will be unusually good. Fruit has dropped badly where trees were unsprayed and uncultivated. There is no rot but scab is prevalent. A detailed summary follows:

In the northwestern section where most of the apples were produced last year, the weather has been very dry. There is some injury from the drought particularly in unsprayed and uncultivated orchards. The present estimate is 31 per cent of a crop, a decline of six per cent in a month. Heavy rains have just fallen there which will greatly improve the situation. Grapes promise from 50 per cent to 75 per cent of a full crop but blackberries and raspberries are a failure.

In the northeastern section, apples promise 40 per cent, a decline of only a little more than one point. The same is true of peaches. Slight drought injury is reported by a majority of the growers. Grapes promise 80 per cent of a full crop but blackberries only 12 per cent.

In the central section, the apple situation has dropped from 37.5 per cent to 25 per cent. In this territory, the soil for the most part is of such a nature that continued dry weather has caused much fruit to drop. Very little signs of disease. Peaches have declined from 25 per cent to 21.5 per cent. Grapes promise three-fourths of a full crop but berries are almost a total failure.

In the southwestern section apple prospects are eleven points poorer than a month ago, the present estimate being 21 per cent. There is considerable complaint of drought injury although the well cared for orchards are unhurt. In the main, fruit has dropped badly although sprayed orchards look well. The peach outlook is four per cent better than a month ago. Some rot has developed and unsprayed peaches are often scabby. Grapes are estimated at 60 per cent and the berry crop at 22 per cent.

In the southeastern section the drought injury has been less than elsewhere in the State. Apples have dropped badly perhaps on account of lack of spraying. The apple crop prospects have declined only four per cent while the peach outlook is very much better than a month ago. Apples now promise 36 per cent of a crop there, and the same estimate is made for peaches, but the latter must be discounted 50 per cent or more on account of seedlings, and other marketable sorts being reported on. Grapes promise a full crop but berries are a failure.

Nearly all sections of the State have lately had rain so that the situation as regards apples certainly ought not to grow any worse, and it is believed that it will materially improve as additional moisture in the soil will cause the fruit to increase in size very rapidly. It now seems that nothing can prevent an apple crop which will be fully 200 per cent greater than was harvested in the State last year.

EXHIBITIONS

The American Apple Exposition bulletin is published by the secretary of the American Apple Exposition with headquarters at the Auditorium, Denver, Colo. This organization expects to hold an important exhibition, November 12-18, in Denver. Prizes are to be given for the best commercial packs, for attractive district displays, for improved forms of packages, for photographic displays of fruit and orchards, for home-made by-products of the apple and for factory-made by-products of the apple. An extensive premium list has been arranged and an attractive arrangement of prizes are offered. Varieties will compete against each other and not indiscriminately. The largest prize is \$1,000 for the best carload. Two hundred fifty dollars is offered for the best 50 boxes of apples, which of course provides a very attractive sale for each box.

STUDENT LABOR

The College of Agriculture at Cornell University has been making arrangements to secure students positions on farms in New York State where they can get practical experience in the different lines. To this end, a letter was sent to nearly 600 New York State farmers regarding the sort of help which was available. The letter stated that the students who were seeking positions on farms were not looking for temporary work while nothing else offered, but that

they intended to make farming their life occupation, and would take interest in the work accordingly. Only such farmers were written to as were considered by the College to be qualified to take young men who were learning. Four classes of young men who would be available were mentioned: (1) those who wished to gain practical knowledge before entering the College of Agriculture; (2) students desiring summer work both for experience and for remuneration; (3) students somewhat experienced in farm work who wish to earn money to help them in continuing their studies; (4) those who have finished their college course, and desire to become superintendents or managers.

To this letter less than 25 replies had been received up to the first week in June. Are not the experienced and successful farmers willing to do their part in teaching agriculture to the youth of the state?

FURTHER ADVICES REGARDING FRUIT PROSPECTS

APPLES

As was the case early in the spring, apples in New York State promise well, and the crop will probably equal last year's. Baldwins will not be quite so plenty as other varieties.

Only about half the usual quantity of apples will be shipped from Idaho and parts of Oregon this fall.

Central Illinois expects a busy harvesting season with apples and some other fruits.

Winesap apples in the Grand Valley of Colorado seem to have been affected more seriously than other kinds by the April freeze.

From various counties in Michigan come unusually favorable reports regarding apples and other tree fruits.

Virginia orchardists report prospects for a fine apple crop.

PLUMS

The California plum crop is heavy this year.

There is an exceptionally short crop of plums in Kentucky. The quantity of other fruits is correspondingly small.

Plums and other stone fruits are being killed by the heat in Indiana, so that much of the green fruit has fallen to the ground.

PEARS

A good pear crop is expected in California, but the supply of Bartletts is not likely to equal the demand.

One grower in North Yakima, Washington, estimates that the pear crop in that section will be the largest in its history.

Pears will be shipped in large quantities from West Virginia, as is thought to be the case with most of the fruits raised there.

Bartlett pears are in a somewhat unfavorable condition near Batavia, N. Y.

The Kieffer pear crop in Jersey is predicted to be the lightest in several years.

PEACHES

There will be large yields of Crawford and Elbertas in New York.

Peaches are among the few California fruit crops that do not augur quite as well as usual this year. Prospects are good in the northern and central parts, but the San Joaquin Valley suffered loss on account of late frosts.

There will be very few peaches around Rutledge, Tennessee, due to late frosts. The same is true of the region about Princeton, Indiana.

In Delaware the peach crop will be light.

Thos. J. Lane and John McMullen—office assistant and foreman of Thos. Meehan & Sons, Dresher, Mont'g Co., Penna. visited a few large nurseries in Rochester and Geneva. While in Rochester, they called at the office of the NATIONAL NURSERYMAN.

THE HORTICULTURAL ESTABLISHMENT OF HEMERAY-AUBERT, 51, ROUTE D'OLIVET ORLEANS, FRANCE

Without in any way wishing to criticise the manner in which horticulture is practised by other nations, one fact is, however, certain that the large nurseries of which our own countrymen and foreign horticulturists are all tributaries, are to be found principally in the valley of the Loire where the temperate climate is so admirably suited for the cultivation of fruit, forest and ornamental trees says a writer in the *Revue Universelle*.

Is it not, effectively, in those marvellous provinces of Orléanais, Touraine and Anjou, which dispute in turn the title of "Garden of France," that we find those model-establishments which give us the highest opinion of our national horticulture?

At Orleans, where the climate is specially propitious, horticulture has always been held in great honor; it is there that are grown and multiplied, in an admirable position and in an appropriate soil, all the ornamental and useful vegetables and trees, of which millions are sent abroad each year to carry wide and far the renown of the French growers.

In this district, privileged for cultivation, we can admire, for example the vast and superb nurseries owned for the last eighty years, and always handed over from father to son, by the firm of Hèmeray-Aubert. There, lives a most interesting horticultural staff, admirably trained and experienced in the art of production and multiplication of fruit, forest, ornamental trees, etc.

The Hèmeray-Aubert Establishment was founded in 1830 by Mr. Hèmeray-Gauguin, continued by his son Hèmeray-Aubert from 1879 to 1908, and finally by his grandson, Mr. Hèmeray-Maurice, since that date.

The latter, although he was brought up in the business, did not content himself with the knowledge gained under his father's tutorship: he made several long stays abroad, devoted himself to special studies on agriculture and horticulture, and thus became a most competent chief in whose hands the firm cannot but increase in prosperity, if it be still possible.

The establishment, which now owns over 68 hectares (about 168 acres) of nurseries, makes a specialty of young fruit plants raised from seed, plants for all standard forest and fruit trees, all conifers in grafted plants for ornamentation and conifers for replanting forests; of all young ornamental plants, flower shrubs for massives, shrubs with foliage for forming hedges or all kinds of garden decorations, etc.

The firm has also a superb collection, including over five hundred varieties, of rose trees carefully selected among the best and most beautiful.

Over five hundred thousand standard rose trees, dwarf rose plants, etc., are sold annually by the firm. The plants are raised by grafting, from cuttings or from seed.

We first of all had a look at the four hectares (10 acres) near the offices 51 Route d'Olivet, Orleans, taken up mostly with rose trees and sowings. There, as far as the eye can see, are rectangular beds planted with young rose trees.

The bedding-out gardens also offer a most interesting sight. Here are effected the cuttings and the graftings of all kinds, by application, by simple or complicated English incrustation, by approachage for the conifers, etc.

No. 17 Rue Guignenault and Route St-Mesmier there is situated a fine nursery of eight hectares (20 acres) devoted to fruit trees and bushes. Here are also grown wysteria, nut-trees, etc.

At St-Pryvé, 3 kilometres from Orleans, there are immense and magnificent nurseries over 50 hectares in area for forest trees and standard fruit trees.

Finally, in very parts of the district the firm has several small nurseries, about six hectares (15 acres) altogether, for the cultivation of conifers, bush plants and evergreens, forming the complement of this vast enterprise.

Over 200 people are employed in the Hèmeray-Aubert Establishment; the nurseries are admirably arranged and managed; the watering system is perfect. Numerous reservoirs, supplied with water from

the town works, are placed at various points and are fitted with taps under pressure. The watering is done with hoses and with watering-cans. Well and spring water is never used as it is considered too cold.

All cultivation is done by hand with the spade, this system being preferable in most cases.

Besides the nurseries already mentioned, the firm has also large osier plantations the crops from which are used for tying up the plants and for making the baskets for packing.

A most complete collection of aratory implements is at the disposal of the workmen, as well as presses for closing the baskets, etc.

In conclusion, and in order to give our readers a vague idea of the importance of this Establishment, we will quote a few figures.

Over 25,000 kilos of moss are employed; 500,000 rose trees, 1,000,000 black pines and over 5,000,000 fruit trees are sold annually.

By the beauty of all their plants and by the great care with which they are raised, the Hèmeray-Aubert nurseries have acquired a high and universal reputation and they have a numerous and faithful clientele in France, in North America, Germany, England, Switzerland, Italy, Spain, the British Colonies, the Argentine Republic, etc.

Numerous awards, Gold Medals, Grands Prix, nomination as Member of the Jury, Hors Concours, obtained at the Exhibitions at Paris, Orleans, Versailles, etc., have confirmed the merits of this horticultural firm.

We cannot close this visit without giving just a glance at the green-houses containing the delicate plants, the vast hall for the multiplication in summer, the packing-rooms, and we must not forget to remind those interested in the matter that a catalogue is always at their disposal.

In short, an establishment like this not only renders great service to its own country, but also to all those to which it sends plants, and we are glad to cite it in our columns as one of the most important in the whole district.

Catalogues Received

William Street Nurseries, Rice Bros. Prop., Geneva, N. Y. Surplus List.

Winfield Nursery Co., Winfield, Kans. Advance list for fall.

E. Y. Teas & Son, Centreville, Ind. Wholesale price list of Peonies and Iris, for fall of 1911.

Berrydale Experiment Gardens, Holland, Mich. Catalogue of New Standard Berries.

Martin Musser, 38 Cottage Ave., Lancaster, Penn. Booklet containing names of Plants useful for Hedges and Wind breaks.

Isaac Hicks & Son, Westbury, L. I., N. Y. Catalogue of Evergreens for August and September.

Sluis & Groot, Enkhuizen, Holland. Crop Report.

A. Dessert, Chenonceaux, France. Novelties for 1911.

Jewell Nursery Co., Lake City, Minn. Surplus List for Fall.

Jackson & Perkins Company, of Newark, New York, are just completing an immense new frost-proof building for the storage of nursery stock. It is 160 feet long by 60 feet wide. The walls are built of cement blocks laid in three separate courses, thus giving two air spaces in the wall and thoroughly insulating the building against both heat and cold. The structure is a model of its kind, and the additional room which it provides has been made absolutely necessary by the Company's rapidly increasing business.

NATIONAL NURSERYMAN:

By neglect we allowed our subscription to expire without renewal several months ago, and I tell you I Miss It.

Texas

WILL B. MUNSON.

NATIONAL NURSERYMAN:

Enclosed please find check for one dollar renewing our subscription to the NATIONAL NURSERYMAN which is a very welcome visitor every month,—interesting and instructive.

New York

THOS. MARKS & Co.

ATTRACTIVE HOME AND NURSERY OF W. N. SCARFF, OF NEW CARLYLE, O.

In a recent issue of "Country Life in the Miami Valley" a very interesting account, attractively illustrated, appears descriptive of the home and nursery enterprises of Mr. W. N. Scarff, who is well known to the nurserymen of the United States. Mr. Scarff for a number of years has made a specialty of bush fruits and is now recognized as an authority in this field. He has introduced a number of important varieties and is engaged in the origination of others. His methods of tillage are such as to bring the products to the highest state of development and his establishment has a reputation for producing the highest grade product of its type. The illustrations depict an attractive country home with all the aesthetic features and comforts which should belong to the best type of country living.

Mr. John Watson, of Jackson & Perkins Company, sailed from Liverpool August 24th, on his return from a two months' European trip in the interests of his house. He visited the leading horticultural centers of Great Britain, France, Belgium, Holland and Germany. He reports extremely dry weather prevailing throughout Europe, and many kinds of stock suffering severely therefrom.

The Wragg Nursery Co. of Des Moines, Iowa, have lately purchased the young and growing stock of the Grand View Nursery and Orchard Co. of Des Moines, and also of the Iowa Nursery Co. which was a mail order department. The company will close their business at the end of the year, at which time M. J. Wragg, manager of the Wragg Nursery Co. will take over companies.

J. B. Pilkington of Portland, Ore. accompanied by his wife called on nurserymen in Rochester and Western New York during the month of August.

E. S. Welch of the Mount Arbor Nurseries of Shenandoah, Ia. also paid a visit to the nurserymen in Western New York, and called at the office of the NATIONAL NURSERYMAN.

The President of the American Association of Nurserymen,—J. H. Dayton of Painesville, Ohio was in Rochester the middle part of August on his way home from attending a meeting in New York of the Ornamental Growers.

Stark Bros. Nursery and Orchard Co. recently donated a carload of fruit trees to school children in their home town as well as other nearby villages.

CATALOGUES RECEIVED

Victor Detriche & Co., Angers, France. Price list fruit tree stock, forest tree stock, ornamental deciduous and evergreen, roses, and etc.

Chase Nursery Co., Huntsville, Ala. "Buds" and budding supplies.

F. Delaunay, The Nurseries, Angers, France. Specialties fruit tree stocks of every description,—young plants for nurseries, and woods, roses, and etc.

Howard & Smith, Los Angeles, Calif. 1911 catalogue. Beautifully illustrated catalogue, on highly enameled paper. Color scheme of cover, black and white. New Shasta daisies, grace the front cover, while cactus dahlia, "Mrs. H. Shoesmith," the back cover.

Our Book Table

PRACTICAL SCHOOL GARDENING by Percy Elford and Samuel Heaton. Oxford: Clarendon Press, 1909. Pp. 224. 2 s. net. Appendices and index.

This text will receive a glad welcome at the hands of the elementary teacher of school gardening. Much effort has been expended to insure correctness of information, and while the subject matter is presented in a simple, untechnical manner, its comprehensiveness of treatment will render it a valuable guide to the professional gardener as well. It aims to weave the study of gardening into the curriculum of the school and furnish a connecting link between the different studies now taught, all of which can deal with and be illustrated by means of the results obtained from the school garden. When coordinated with the other studies, school gardening trains the child in methodical reasoning, makes the eye, ear, and hand work together, and above all, gives added zest to his school life.

The first four chapters take up the laying out of the garden, the necessary tools, preparing the soil, sowing, and planting. Then comes a description of the vegetable garden pests, a chapter on herbs to be grown, and one on plants for salads. One chapter tells how to make a hotbed. Fruit culture, fruit-tree pests, flowers, insects, and diseases which attack flowering and foliage plants, friends of the garden, and weeds are all treated. The last two chapters give a calendar of gardening operations and a nature calendar. The appendices at the end comprise useful tables and charts. The text is interspersed throughout with helpful diagrams and illustrations, as well as practical suggestions from existing school gardens.

SOUTHERN GARDENERS' PRACTICAL MANUAL. J. S. Newman, Director State Experiment Station of South Carolina. 7 x 4 3/4 inches. 220 pages, illustrated.

This little volume is quite unique in its character and method of presentation. It is written for the South, and from the standpoint of personal experience and knowledge. In method of treatment, it is somewhat of a return to the old time garden manual, and some of the remarks are not quite in accord with present day knowledge, as set forth by colleges and experiment stations. The style of treatment is informal and quite readable. The book is divided into four parts, the first treating of fundamental principles of plant growth; the second of varieties and classes of vegetables; the third deals with the so-called small fruits; and the fourth with methods of controlling the enemies of the garden. We have no doubt that this little volume will find an appreciative set of readers in the South, whose interests it is specially designed to serve.

HILL TOP ORCHARD COMPANY

ROMNEY, W. VA., June 8.—A charter has been issued to the Hill Top Orchard Co. at this place. The capital is \$10,000 and the incorporators are E. L. Chapin, R. P. Monroe, Anna Monroe, C. C. Wolford, H. T. Mytinger and James Rudy, all of this city.—*New York Packer*.

NEW YORK STATE VEGETABLE GROWERS

This new organization will make an educational exhibit at the New York State fair this month. The fair commissioners make a small grant to aid this initial exhibit of the new society.

P-W-R

ARSENATE OF LEAD

P-W-R

Supplied by Wholesale Druggists and other Dealers throughout the U. S.

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Straight, clean stems, splendid roots, 8 to 10 feet
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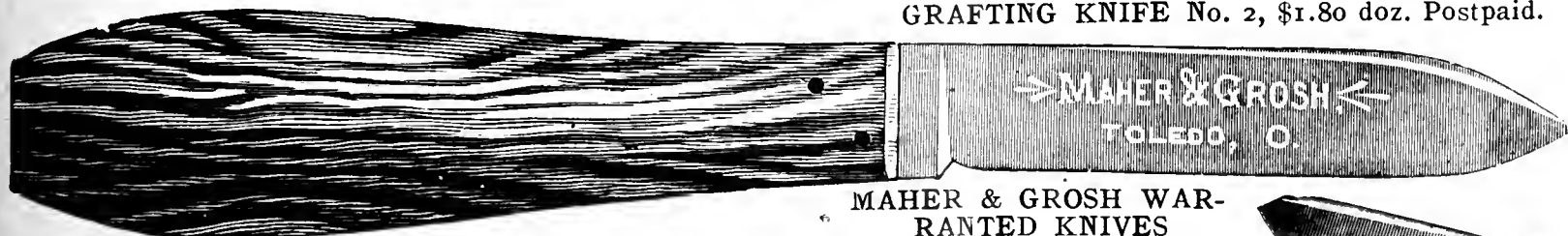
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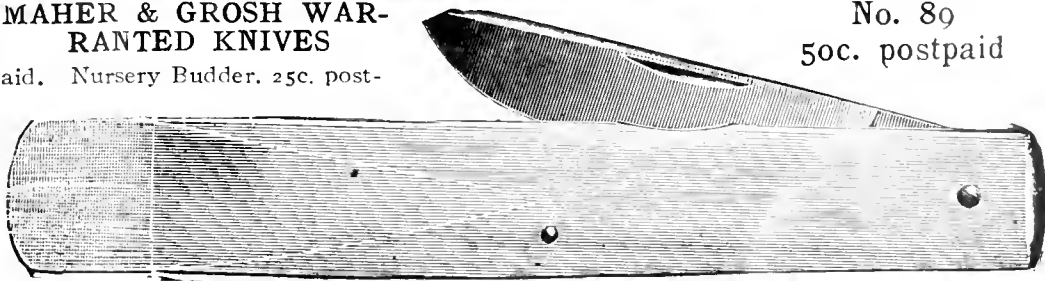
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HORSE CHESTNUTS, 3½ to 4½ ft., splendidly rooted, straight and clean.

Scotch or Wych. Elm Stocks, 3 to 4 ft.

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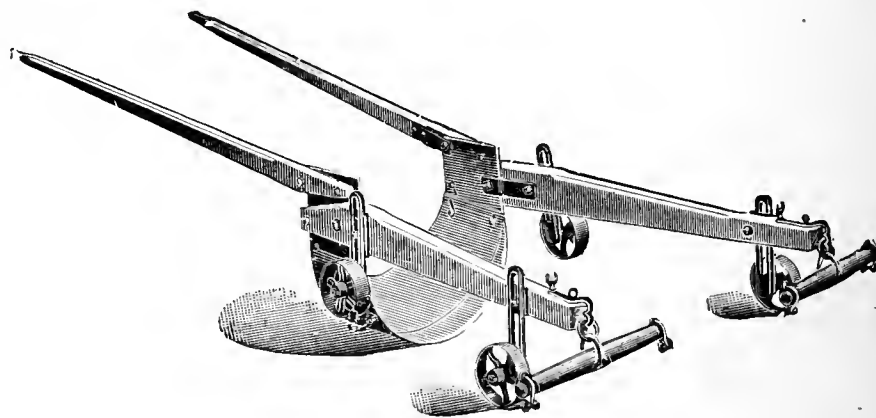
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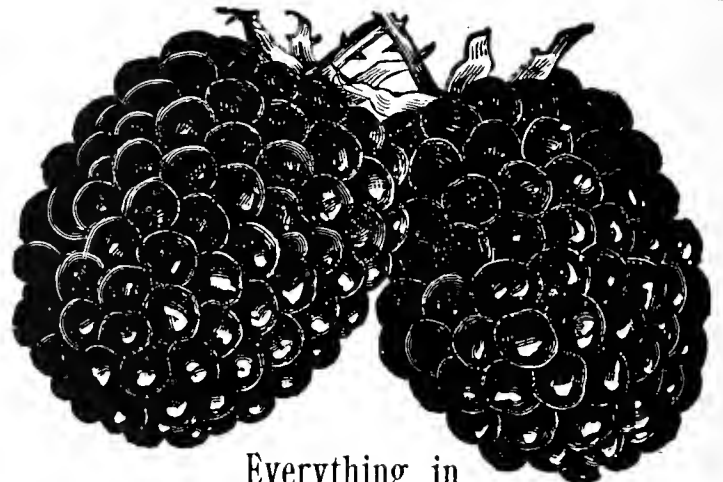
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ORIENTAL PLANES.

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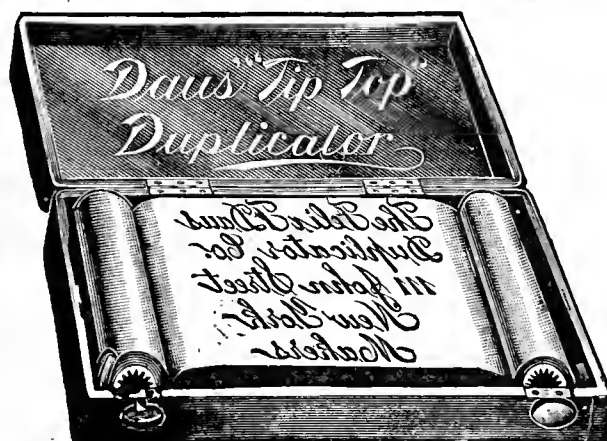
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PEACH TREES

IN COMMERCIAL VARIETIES

NORWAY MAPLE,
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CALIFORNIA PRIVET,
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3,333,333 Budded a Year Ago at Harrison's Nurseries

All these trees are of varieties that we carefully test in trial and fruiting orchards; we therefore know them to be of first quality and strictly reliable. We have over 100 varieties, 1-year buds as follows:

1 inch up, 7 to 8 feet.
 $\frac{3}{4}$ to 1 inch, 6 to 7 feet.
 $\frac{9}{16}$ to $\frac{3}{4}$ inch, 5 to 6 feet.
 $\frac{1}{2}$ to $\frac{9}{16}$ inch, 4 to 5 feet.
 $\frac{3}{8}$ to $\frac{1}{2}$ inch, 3 to 4 feet.
2 to 3 feet.

APPLE TREES

Apple trees that *succeed*—that are profitable to plant in home or commercial orchards—are our kind, and since you're interested in that sort, too, we'd like to talk it over with you.

We will have three million one-year budded apple trees—5 to 6 ft.

McIntosh	Red Astrachan
Baldwin	Early Harvest
Grimes'	Yellow Transparent
Stayman's	Rome Beauty
Stark	Winesap
Ben Davis	York Imperial
Gano	

and other leading kinds.

900,000 one-year grafts.
100,000 two-year buds and grafts of
Baldwin Yellow Transparent
Rome Beauty Red Astrachan
Winesap Early Harvest
York Imperial Ben Davis
N. W. Greening Gano
Transcendent Crab Duchess

and others—all well grown. Will have some one inch and up, extra grade trees.

PEAR, CHERRY, GRAPE, ETC.

Such fruits as pear, cherry, plum, grape, berries, vegetable roots, etc., are strong lines with us. We maintain trial and fruiting orchards, giving new varieties careful tests.

We will offer ten million Strawberry Plants next spring. Give us a call.

PEAR TREES

Kieffer

50,000 Kieffer Pear, 2 year $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$ and 1 inch
50,000 Kieffer Pear, 1 year, 4 to 5 ft., 5 to 6 ft.
All on French roots—no finer grown.

Bartlett

10,000 Bartlett, 3 year $\frac{3}{4}$ and up and 1 inch up.
No finer grown.
5,000 Bartlett, 2 year, $\frac{5}{8}$ to $\frac{3}{4}$, also Garber and Clapp's Favorite.

CHERRY TREES

30,000 2 yr. and 3 yr. Sweet and Sour Cherry; leading varieties, $\frac{5}{8}$ and $\frac{3}{4}$ in.
20,000 1 yr. Sweet and Sour Cherry.

QUINCE

2,000 Quince, 1 year.

We're *always* proud of the stock we supply, because it *must be right* before it leaves us; if it doesn't measure up to the Harrison standard it is hauled out and burned; never gets to the packing shed at all.

Here are a few *extra good* things we're offering for the fall trade; they're well grown, well rooted, well developed; and you and your customers will be quick to appreciate their high quality.

Drop us a line now for complete list, with prices; better still, say what you are most in need of and we'll quote on the quantity you want.

Come down and see us this summer; look over our 2500-acre place for yourself. Our doors are open, and we'll do our level best to make you glad you came. Let us know when to expect you.

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10,000 Concord, 2 year, transplanted
10,000 Concord, 1 year, fine
10,000 Moore's Early, 2 year transplanted

Our grapes are in fine shape; the vines will please you.

ASPARAGUS ROOTS

100,000 2 year strong Asparagus roots
200,000 1 year, leading varieties: Palmetto, Barr's, Conover's, Giant.

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You'll not find a finer lot of maples than we grow in our Nurseries at Berlin; our rich, loose soil encourages root formation, and each tree has plenty of room to grow. Your trade will be pleased with these trees.

NORWAY MAPLES

100 Norway Maples, 3 inches, 12 feet
1,000 Norway Maples, 2 inches, 10 to 12 feet
12,000 Norway Maples, 1 $\frac{1}{2}$ inches, 10 ft.
13,000 Norway Maples, 1 $\frac{1}{4}$ inches, 9 to 10 feet
15,000 Norway Maples, 1 inch, 8 to 9 ft.
110,000 Norway Maples, $\frac{3}{4}$ inch, 7 to 8 feet
Straight, smooth—no finer grown.

SUGAR MAPLES

1,000 1 $\frac{1}{2}$ inch, 10 feet
1,000 1 $\frac{1}{4}$ inch, 8 to 10 feet

SILVER MAPLES

1,000 Silver Maples, 3 inches 12 feet
1,000 Silver Maples, 2 inches, 10 to 12 feet
2,000 Silver Maples, 1 $\frac{3}{4}$ inches, 9 to 10 feet
3,000 Silver Maples, 1 $\frac{1}{2}$ inches, 9 to 10 feet
4,000 Silver Maples, 1 $\frac{1}{4}$ inches, 9 to 10 feet
5,000 Silver Maples, 1 inch, 8 to 9 feet
10,000 Silver Maples, $\frac{3}{4}$ inch, 7 to 8 feet

MISCELLANEOUS

1,000 Russian Mulberry, 8 to 10 feet
1,000 Catalpas, 8 to 12 feet
1,000 Box Elder, 2 inches
1,000 American Black Ash, 1 $\frac{1}{4}$ inches
1,000 Carolina Poplars, 1 $\frac{1}{4}$ inches
1,000 American Linden, 1 inch
1,000 American Elm, 1 inch

CALIFORNIA PRIVET

Buy your privet from Privet headquarters—we have acres and acres of it in all sizes and all ages. Can make prompt shipment of any quantity. You can build a reputation for quality on such Privet as this.

5,000 8 feet, 4 year, 9 branches or more
6,000 7 feet, 4 year, 8 branches or more
25,000 6 to 7 feet, 3 year, 7 branches or more
50,000 5 to 6 feet, 3 year, 7 branches or more
60,000 4 to 5 feet, 3 year, 7 branches or more
70,000 3 to 4 feet, 3 year, 7 branches or more
75,000 3 to 4 feet, 2 year, 6 branches or more
70,000 2 to 3 feet, 2 year, 5 branches or more
165,000 18 to 24 in., 2 year, 4 branches or more
160,000 18 to 24 in., 1 year, 3 branches or more
155,000 12 to 18 in., 1 year, 3 branches or more
50,000 6 to 12 in., 1 year, 3 branches or more

BERBERIS THUNBERGII

50,000 2 year, 12 to 18 inches
5,000 3 year, 18 inches
1,000 4 year, 2 to 3 feet



York Imperial Trees Loaded Like This are Worth Money.

ROSES

5,000 Baby Ramblers

RHODODENDRONS, 2,000

AZALEAS, 2,000

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500 6 feet	500 4 feet
500 5 feet	500 3 feet
	50,000 2 feet

KOSTER'S BLUE SPRUCE

1,000 2 feet	1,000 12 inches
1,000 18 inches	1,000 6 inches

COLORADO BLUE SPRUCE

50 3 to 4 feet	1,000 12 inches	1,000 18 inches
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HEMLOCK SPRUCE

100 2 to 3 feet	100 18 inches
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GLORY OF BOSKOOP

500 3 feet	500 2 feet
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PYRAMIDAL AMERICAN ARBORVITAE

1,000 4 feet	1,000 3 feet	500 2 feet
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BLUE CEDAR

500 4 to 5 feet	500 3 to 4 feet
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AMERICAN ARBORVITAE

100 3 feet	1,000 2 feet
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J.G. HARRISON & SONS PROPRIETORS
BERLIN MARYLAND

Designed and written by The McFarland Publicity Service, Harrisburg, Pa.

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THE NATIONAL NURSERYMAN



OCTOBER, 1911

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

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CHERRY

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FOREST TREE SEEDLINGS

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Write us for prices on carload lots.

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1500 Acres

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Dec. or Feb. shipment

Apples, 1 yr. br. roots, tr. 7/12, 6/10, 5/7, 3/5 m/m.

" 1 yr. untr. str. roots, 7/12, 6/10, 5/7, 4/6, 3/5 m/m.

Pears, 1 yr. br. roots, tr. 7/12, 6/10, 5/7, 3/5 m/m.

Quince, 1 yr. Angers cuttings, 7/12, 6/10, 5/7 m/m.

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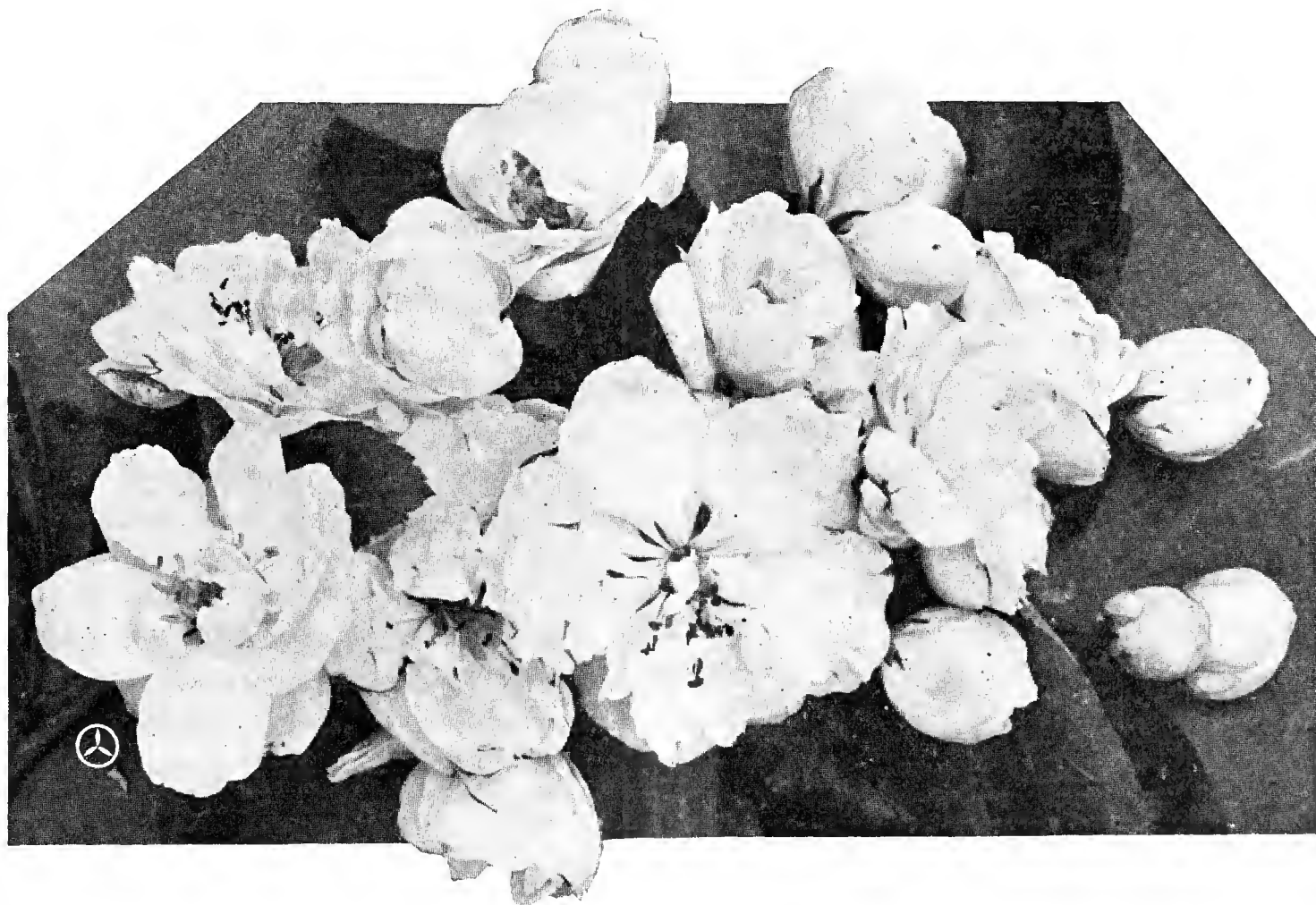
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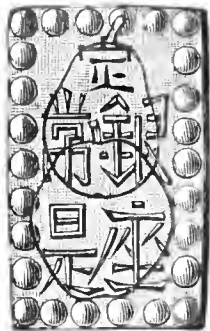
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Nurserymen, Florists and Planters
RUTHERFORD, N. J.

A CHASE OF THE ROSE



BOTH because of the desire to have a comprehensive collection of rose photographs and because of the needs of many discriminating customers, the J. Horace McFarland Company has been chasing the rose for fifteen years. Originating methods of photography which have formed the basis of all the present-day successes, Mr. McFarland started the collection in 1896 and 1897 by going to the places where then the best rose blooms could be found. Men trained by him have undertaken rose trips almost every year since, with varying success.

In 1910, the rose was systematically chased from Maine to Florida in trips that involved 12,385 miles of travel. Yet some needed specimens eluded the photographers, and the chase was resumed early in 1911. During 1911, there have been traveled 9,084 miles in rose-seeking, to the far South, to the far East and to the far West—with still further trips planned for the fall. A trained man was kept on the Pacific Coast for more than three months, to catch the best of the famed rose blooms of California and Oregon.

The travel involved has included visits to every rose-famous place in the United States. There have been two trips to Oregon, a half-dozen to Florida and Georgia, one to California, nearly a score to New England, one to Ontario, and numberless individual searches. We have been after the rose to the extent of more than thirty-five thousand miles, or as much travel as would take one around the world, and half around again. Many Roses not found anywhere have been grown specially from imported plants. As a result, the collection now includes 2,031 rose photographs—every one a gem, as no inferior pictures are kept.

There are pictures of roses of every family—and of almost every variety. These pictures show roses growing under widely differing conditions of climate and soil, and include photographs of climbing roses, standard roses, roses in bush form, trailing roses, roses grown as shrubbery plantings, roses planted for screens, rose hedges and rose gardens—with single specimens in large numbers. There is a full complement of black-and-white negatives, and a large number of autochromes or color negatives. Many pictures illustrate specific points in rose culture—pruning, spraying, winter protection, etc.

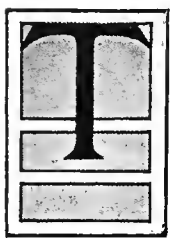
If growing roses for sale, you need good pictures to help sell them—there is no longer any question about the selling power of pictures. We have such rose pictures—more of them than can be found in all other collections combined, we believe, and certainly better ones than are to be secured anywhere else. The price at which we offer these matchless photographs is mighty close to the actual cost of their production. Prints will be submitted for examination—on approval memorandum bill—to any responsible firm. Inquiries promptly answered—we should like to know your rose-picture needs, so that we may tell you how fully we can supply these.

J. HORACE McFARLAND COMPANY

Photographers : Engravers : Printers

HARRISBURG, PENNSYLVANIA

GOOD JOBS FOR GOOD MEN



THE growing importance of the horticultural trades is strikingly shown by the demand for trained men who are familiar with the greenhouse, nursery and seed businesses. We could use, or place with our clients, at least a dozen good men if we knew where to find them. Some of the openings that offer unusual opportunities, details concerning which can be obtained by writing us, are as follows:

COPY MEN.—For our own staff. The first requirement is the ability to write clear, concise, convincing English—and consequently experience on a daily paper is almost necessary. Another essential is love of the things that grow and a successful record in growing plants, trees and shrubs, commercially or otherwise. Further, it is highly desirable to have had training in the sales department of some business—preferably, of course, in one the product of which is sold to the classes of people who buy fruits or ornamentals. Only young men can be considered, and good health, clean habits, ability and willingness to do a lot of hard work, are some of the necessary qualifications.

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CORRESPONDENCE CLERK.—For leading nursery, growing fruit and ornamental trees, etc., in large quantities, and selling both at retail and wholesale. The business of this firm is growing by leaps and bounds, and there is no better opening for a young man of energy, adaptability and some experience in the right line.

OFFICE MANAGER.—For another prominent firm of nurserymen. A man who knows book-keeping, office systems, filing methods, etc., and who is thoroughly up-to-date, will find this the chance of a lifetime. “Has beens” and fellows who know it all need not apply, however,—a “live wire” with executive ability is required.

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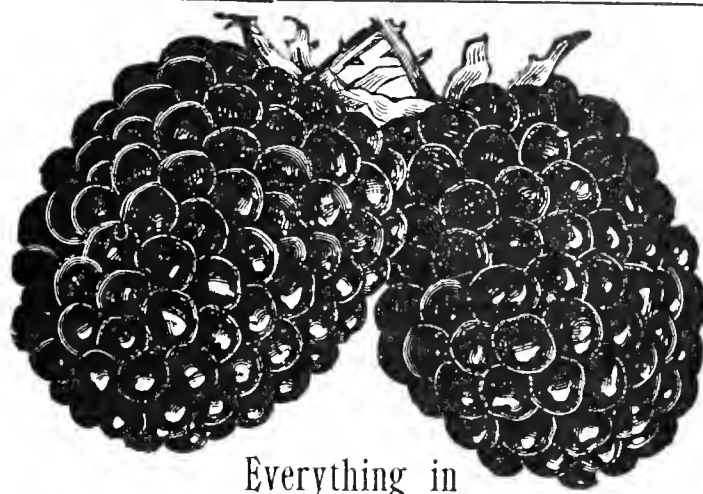
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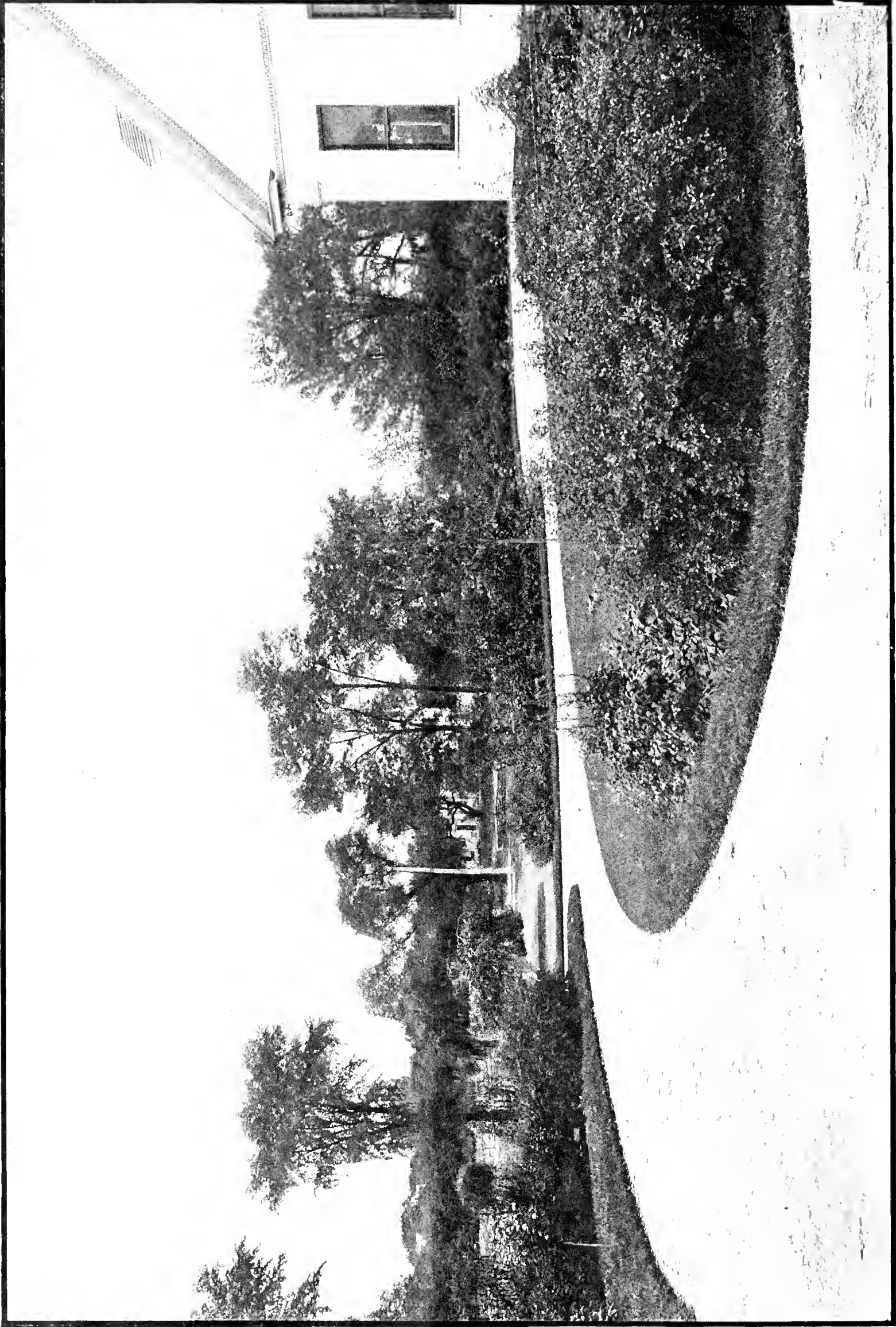
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The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XIX.

ROCHESTER, N. Y., OCTOBER, 1911

No. 10

SHRUBS FOR THE SOUTHWEST

Address Delivered by J. B. Baker, Ft. Worth, Texas, Before Texas Nurserymen's Association, Sept. 13, 1911, at Waco, Texas.

Three years ago I planted a bed of shrubs in my back yard to hide my barn lot and wood pile. The conditions for growth were all unfavorable, so that by the end of the long, dry summer nearly everything was dead. There was one shrub, however, that flourished beautifully. It was the Russian olive. It is now, after three of the severest seasons ever known to Texas, a splendid specimen, fifteen feet high, ten feet across and covered with a rich dense growth of beautiful silvery foliage that attracts everybody's attention. In the Spring the thousands of little yellow blossoms give out a delightful odor that is not surpassed by the sweet olive blossoms or the American Beauty rose. Another shrub that lived and flourished was the chilopsis or flowering willow.

The second season I replanted my bed with some of the very hardiest of the tall growing shrubs, namely the Parkinsonia aculeata, the sophora japonica and mimosa julibrissin. The Parkinsonia was injured by the freeze of last winter and I had to cut it back more than half way, but it came out quickly and now has new branches on it eight feet long and still growing. The pleasing fresh green of the bark and leaves, the peculiar shape of the leaves, being twelve to fifteen inches long and a quarter of an inch wide, the profusion of pretty golden blossoms which cover the tree, altogether make it unusually interesting. The Sophora japonica with its rich dark green foliage and large wisteria like blossoms and its healthy vigorous growth, makes it a fit companion for the olive, chilopsis and Parkinsonia. The mimosa could not keep up with the race, and has made but poor growth, though in the nursery where cultivated it is a vigorous grower.

Last spring I planted another bed of shrubs in another place where the conditions were even more unfavorable for growth than in the first bed referred to. In this bed I needed a few tall growing shrubs and many medium and low growing kinds. Every nurseryman will understand how unfavorable the conditions were, when I say that most of the spireas, philadelphus, deutzias, ligustrums, weigelas and even the altheas, red buds and crape myrtles died during the extreme heat and drouth that prevailed this summer. Yet right in this very bed I have a fine bank of shrubbery that has furnished a wealth of foliage and bloom all the season. In addition to several plants of Russian olives, chilopsis and Parkinsonia, there were several plants of poinciana Gilliesii, vitex agnus-castus and koelreuteria paniculata and a few crape myrtles.

The vitex is a strong healthy grower and a good bloomer and is worthy to rank with the larger shrubs mentioned in the first bed, yet the feature of the second bed was decidedly a clump of the poinciana. The foliage was full and luxurious and as graceful and feathery as a fern and the plants while growing rapidly have been covered almost continuously with strikingly beautiful flowers of crimson and gold. This is by no means a new shrub, except in name. It is found cultivated more or less all over Texas, but usually without a name, though it has several local names, such as poponax, acacia Texana, bird of paradise and other names that I cannot recall just now. The nurserymen of California declare it is a poinciana and that is doubtless what it will be called. At any rate it is one of the best of all round flowering shrubs I know of. For any place and for drouthy hard conditions I know of nothing to equal it. It stands among shrubs, where the Umbrella China does among shade trees. If the soil be so poor and hard and the weather so hot and dry that all other shade trees die, the China will go right on growing just as if the conditions were exactly what it delighted in. So it is with the poinciana. I have never seen it fail to do well anywhere.

There are other shrubs that should be included in this list of extremely hardy ones, though I do not give them the same comparative test. They are the tamarix and robinias. The old salt cedar that grows on the sands of the sea shore and the drifting sands of west Texas is a tamarix. The old variety has been so improved as to make it valuable for foliage and flower, as for instance the variety Japonica plumosa is strikingly handsome in form and foliage, while hispida estivales is covered nearly all summer with bright pink blossoms as pretty as the heather of England and Scotland. The robinias comprise species from small shrubs like the hispida rosea to large trees like the black locust, and many of them produce a wealth of bloom from pure white to the various shades of pink, that for delicate and dainty tints are not equalled by any other shrubs I know of. The above named plants to which might be added cydonia and some species of the rhus, are such as I would recommend for drouthy seasons or regions and should be largely used wherever shrubs are planted, but of course they do not by any means represent the complete list for Texas planting. The crape myrtle, in its four or five colors, is perhaps the best shrub for Texas, but it must be grown as a shrub and

not as a tree. When allowed to grow, especially in central and south Texas, it becomes a small tree, with hard wood, bare stems, a paucity of foliage and small clusters of flowers, but when it is cut back to the ground every year or two and thus kept as a shrub it has about all the good qualities that could be asked for.

The altheas also deserve special mention. Just now, (Sept. 9th) our blocks of altheas are the showiest things in the shrubbery department. The shrub most extensively planted is the spiraea Van Houttei. It is the best of the low growing shrubs and is extensively used as borders for beds or masses of other shrubs. Other shrubs that are standards and generally well known for their hardiness and adaptability to our climate are the buddleias, caryopteris, deutzias, forsythias, bush honeysuckles, Judas tree, lilacs, philadelphus, ligustrums and pomegranates. All of these have stood the drouth well, wherever cultivated. In our experiments this season with a number of kinds not generally planted in the South-west, we are pleased with the ceanothus Americanus, laurus tinus, hypericum moserianum, and sambucus, but the shrub that interested us most is a hardy shrubby salvia, producing a profusion of scarlet blossoms very similar to the salvia splendens. It is a neat growing plant, not quite so large as the spiraea Van Houttei and will prove very valuable for bordering large beds. It has been blooming from the time we set it out in April until now, and will doubtless continue until frost. I am watching it with a great deal of interest.

Planters generally in the Southwest have not learned to use shrubs to the best advantage. Occasionally an individual specimen may be planted by itself to good advantage, but as a rule they should be grown in beds or groups. Their best use is not so much to show the beauty of their flowers or foliage as such, but more for the general effect obtained by combining plants of different heights, shapes and habits, as well as color of foliage and flowers.

To the landscape architect, shrubs form one of his most valuable assets. Without them he could not complete the beautiful effects produced by the proper blending of foliage and flowers. It is easy to find the reason why shrubs have not been more generally planted in Texas. They have often been sold by agents, who knew nothing of their habits and requirements and more than this, many of our park and other large plantings are being done by men wholly ignorant of the names and nature of shrubs. Too often they send away to North Carolina, Ohio or some other place for shrubs totally unsuited to our conditions and climate. This is disheartening and it is the duty and privilege of the nurserymen of the Southwest to disseminate accurate knowledge, that the public may understand what to plant in a dry climate and what in a wet, what will thrive best in the shade and what in the sunshine.

RESOLUTIONS ON THE DEATH OF W. F. HEIKES

RESOLVED, that we, the Nurserymen of Texas, learn with deep regret of the death of W. F. Heikes, of Huntsville, Alabama. We esteem Mr. Heikes to have been a most enterprising nurseryman, one of the best in the South or in the United States, a fine business man, a true and high type

of American citizenship, and a Christian gentleman. We feel in this dispensation that a great man has fallen, yet we appreciate that though he has gone from us, the impress of his character and good works remain with us.

RESOLVED, that the Secretary tender to the bereaved family our sympathy, and a copy of these resolutions, also to the Huntsville Wholesale Nurseries.

The State of Louisiana with many million acres of now uncultivated but highly productive soil, a mild climate which permits a series of crops to be grown on the same land each year, and a net work of navigable canals and streams which insures cheap transportation, will bid for the immigration Canada is now getting from the United States. In order to make the bid most effective, a Louisiana Agricultural Exhibit Commission has been appointed by the Governor, and supplied with funds by the Parishes, or Counties of the State, for the purpose of gathering exhibits and data concerning agricultural production, cost and profits, health and market conditions, character of soil and climate, etc., and thus equipped meet the people of the North and West face to face.

The Commission will demonstrate that with only about 5,000,000 acres in cultivation out of 27,000,000 acres comprising the State, the people of Louisiana have prospered, her planters have enjoyed wealth and affluence, and her farmers have never known want. The plantation or overlord system, is now rapidly disappearing, and the great estates are being subdivided and cultivated by smaller independent farmers. The cutover forests are being cleared and opened up to settlement. The wet alluvial lands are being drained and made available to the plow. In this manner new tracts of virgin lands are being made available and the State in its official capacity is taking time by the forelock, and is going after farmer families to occupy these lands.

The first exhibit the Louisiana Commission will give will be at the United States Land and Irrigation Exposition, at Chicago, November 18 to December 9. Others will follow later. The object of the Commission is to exhibit average rather than abnormal products, so that the farmer seeking accurate information may learn exactly what the soils of Louisiana produce under normal conditions.

No land will be sold at these exhibits, no private enterprise will be exploited and no information will be given out except such as has been carefully investigated and compiled by the Commission itself. The Chairman of the Commission, Dr. W. R. Dodson of Baton Rouge, is the Dean and Director of The State College of Agriculture and Agricultural Experiment Stations.

Other members are: Robert Glenk, New Orleans, Curator Louisiana State Museum; Louis N. Brueggerhoff, Shreveport, the active head of the Louisiana State Fair Association; M. Leigh Alexander of Alexandria, who represents the Agricultural interests of North Louisiana, and A. B. Graves of New Orleans, who represents the Agricultural interests of South Louisiana.

THE GRAPE CROP IN WESTERN NEW YORK

Grapes began to move out of the Chautauqua and Erie grape belt about the middle of August, which is the earliest shipping on record for twenty years. Concords were picked as early as the tenth of September. The outlook for prices is excellent. Large quantities will be used up in the manufacture of grape juice by F. M. Randall and others in that business in the Ripley and Westfield district. It is estimated that the crop of 1911 in the Chautauqua-Erie belt will approximate 6000 earloads.

PEARS AND PEAR CULTURE

Varieties for Different Localities. Orchard Practices.

Amateur pear culture in the New World is practically as old as amateur apple culture. Commercial pear culture is comparatively recent. The pear ranks among the aristocrats in the family of orchard fruits. In the old days of the Massachusetts Horticultural Society, it was not uncommon to find over a hundred varieties of pears exhibited by a single grower. These great amateur collections are now almost things of the past. The orchards around Boston and the home plantings abounded in many varieties of the European pears.

The great collection of pears in New York has long been recognized as that established by Messrs. Ellwanger and Barry in connection with their experimental orchard. This planting has furnished magnificent collections of pears for many years. These collections have been exhibited freely at the New York State fair and at the meetings of the American Pomological Society, held from one end of the country to the other. The educational value of these exhibits is very difficult to estimate. It is unquestionably very large, and in itself is sufficient justification for the maintenance of a great collection of this kind. But such collections in these days of state-supported experiment stations and colleges of agriculture no longer belong to the province of the individual or of the firm, but rather to the state-supported institutions. All honor and credit is due, however, to the public-spirited individuals who established these trial grounds before the days of the official experiment station.

ADAPTATION

The pear does not range as far north and practically no farther south than the apple. It is, therefore, more limited in its climatic adaptation than its relative, *Pyrus malus*.

It is adapted to the clay loams of the country. As in the case of other fruits, wet soils are unfit. Although clay loam, when well drained, is the ideal soil, it will thrive on sandy loam.

SETTING THE TREES AND MANAGING THE ORCHARD

One of the fell diseases of the pear is blight. This often makes its appearance in the nursery row, and from thence is established in the orchard. It becomes, therefore, very important that the grower should buy healthy stock, free from blight. Personally, I would be more insistent on blight-free stock than San José scale free stock; for the latter I could easily control, while in the former, I would be establishing an insidious enemy which was much more difficult to deal with than the scale.

The majority of growers at the present time favor two-year old trees, but the age of the tree is not so important as the size, although I would not recommend a tree older than two years. They are set at from twenty to thirty feet apart, twenty-four feet being a somewhat favorite distance.

POLLINATION QUESTIONS

The investigations of Waite of the Department of Agri-

culture and other students who have followed his lead have shown that a good many varieties of pears will not set fruit satisfactorily when planted by themselves in large blocks. This is called self-sterility. It is a characteristic which varies not only with the season but with the locality. Among the varieties which are more or less self-sterile are Anjou, Bartlett, Clairgeau, Hall, Lawrence, Louise Bonne, Sheldon, and Winter Nelis.

Among the varieties usually self-fertile are Duchess, Bose, Flemish Beauty, Kieffer, Le Conte, Seckel, and Tyson.

Apart from self-fertility or self-sterility, the ability to set fruit with its own pollen, or the failure to set fruit with its own pollen, the question of the improvement of the crop, both in size of individual fruit and in amount of fruit, by cross-pollination is an important one. It has been shown by quite careful studies that most varieties are improved by cross-pollination. Therefore, it follows that it is a good policy to alternate blocks of pears in the orchard. It does not mean that there should be any general mixing up of varieties in the rows or even alternation of rows; but it does mean that not more than three or four rows of a variety should be planted by itself.

CLASSES AND VARIETIES OF PEARS

Until the middle of the last century, there was only one class of pears in common cultivation in this country. This class came from Europe and was known as the European pear. Some of the varieties came direct, that is, were of European parentage. Others were American seedlings of European varieties.

About the middle of the century, a pear known as the sand pear of China, *Pyrus sinensis* was introduced into this country, and by chance a specimen of this found itself in the same garden as a Bartlett pear in Philadelphia. The owner of the garden, Peter Kieffer, planted a seed of the sand pear, and the Kieffer hybrid was produced. This marked a new epoch in pear culture, for the sand pear type is adapted to more southerly regions than the European class. Le Conte is another member of the same hybrid origin, and with the Kieffer has been responsible for extending pear culture far to the South and Southwest, where the older varieties were unadapted.

The Kieffer is noted for its vigor, its productiveness, and its mediocre quality of fruit. But vigor and productiveness go a long way in popularizing a variety. These two qualities are possessed by the Ben Davis. Hence, its wide popularity. The range of the Kieffer is South of that of the Bartlett, and it attains its highest beauty and best quality in the Delaware peninsula. It has been very extensively planted in that region and in New Jersey. It stood first in the order of popularity in New Jersey and Delaware in 1900. More than sixty per cent of the growers of this region favored Kieffer ten years ago. It is probable at the present time that public opinion has veered somewhat, and that Bartlett, Duchess, and Seckel are in the ascendant. Bart-

lett is the great autumn pear of the country. Duchess has been a favorite on dwarf stock, and in western New York has been extensively planted. It is being replaced in newer plantings by Bosc and Anjou. On the Pacific Coast, Comice is a favorite. Towards the northern boundary of the pear territory, Seckel and Flemish Beauty are favorites, and justly so; for their hardiness and reliability justify the grower's preference.

CULTIVATION

Tillage, as in the case of the apple and the peach, is the ideal system of soil management. Now and then an orchard may be seeded down for a year or two, but it is at the best a hazardous and dangerous practice. It has been said that tillage encourages blight. This is a desultory observation and unsupported by any conclusive body of experience. It is probable that blight will thrive most vigorously where the largest amount of sappy growth prevails, but tillage rightly conducted does not necessarily mean unfavorable character of growth. It is quite possible that nitrogenous cover crops may be overdone, and nitrogenous manures, such as stable manures, nitrate of soda, and the like can be applied to excess; but in our experience of a good many years, we recall no shining examples of excessive feeding of this kind. Cover crops should be used with judgment, and with regularity. Growth during the vegetative period should be encouraged by good tillage the forepart of the season, followed with cover crops the latter part. When the tree comes into bearing, manurial fertilizers should be increased. The following suggestions for the use of these fertilizers are presented:

FERTILIZING APPLES AND PEARS

BY WILLIAM S. MYERS

On good soils, the necessity for fertilizers is not usually apparent until the trees begin to bear. In other words, it is possible to grow good trees on soils of moderate fertility, but larger growth and earlier fruiting will result, if fertilization begins as soon as the trees are planted. While no general rule can be adopted that will absolutely fit every situation, it is reasonable to suppose that in the majority of cases an application of 500 pounds per acre of a fertilizer carrying 2 per cent ammonia, 10 per cent phosphoric acid, and 12 per cent potash, repeated each year, will bring good results. This application may be continued until the trees come into bearing, say for five or six years, when the fertilizer should be increased to 800 pounds per acre.

I am in favor of using nitrogen in an immediately available form, and this should be applied so that early vegetative activity is stimulated. It should be used in the nitrate form to accomplish this result. Nitrate of soda will furnish this element, and may be applied at the rate of 150 to 300 pounds per acre. The appearance of the trees, measured by their luxuriance, and the color of the foliage, will determine whether nitrogen is required or not. Wherever lack of vigor or of good green color is noted, nitrogen in the form of a nitrate can probably be employed advantageously.

PRUNING

We are of the opinion that many serious mistakes have been made by growers in over-pruning their pear orchards.

The habit of heading back annually during the winter period, established in connection with the training of dwarf pear trees has in some cases been applied to standards with the result that wood growth has been reduced and reproductive action has been retarded. The heavier the pruning, the more emphatically is the bearing age delayed. We have seen instances of this over and over again, and are of the opinion that only such pruning as is necessary to shape the tree should be practiced each year. Where trees are making too much wood, summer pruning in July can be used to good purpose. Indeed we do not summer prune enough. We believe that the checking of growth on orchard trees during the growing period has just as salutary effect as the florist's practice of pinching the growing plant in the greenhouse, in order to encourage stockiness and develop fruit buds.

THINNING

The Oriental pears are notably prone to overbear. They must be thinned. Other varieties such as Seckel and Louise Bonne can be greatly improved in size by judicious thinning. Our best pear growers throughout the country realize the necessity of thinning and practice it. There are many, however, who are still in the beginner's stage, and do not appreciate the necessity of easing the burden of the tree, in order to improve the size of the current crop and favor the production of the crop the following year.

ENEMIES

Among the insect enemies which have been most insistent and destructive in recent years is the pear psylla. This member of the plant lice tribe, taking its food by the sucking method, has been a severe pest of the pear tree in western New York, and in some other parts of the country, for a number of years. Infested trees show drooping shoots with leaves turning yellow, and the whole tree putting on a sickly appearance which develops to such an extent that by mid-summer most of the leaves will have fallen to the ground. The adult insect hibernates in crevices of the loosened bark. In spring the eggs are placed in the creases of the old bark or in leaf spurs on the terminal buds. The eggs hatch towards the middle of May in central New York, and the young nymphs crawl into the expanding buds. They attach themselves on the undersides of the leaves, and after moulting the adult insect appears. There are several broods of the insects during the summer. Each generation occupies about a month. They excrete a large amount of honey dew, which is deposited on the leaves and fruit. This is frequently attacked by a fungus which discolors it and renders the fruit very unattractive and unsalable. The recommendations for the treatment of this insect are as follows, taken from the latest bulletin of the Cornell Experiment Station:

"These minute, yellowish, flat-bodied, sucking insects are often found working in the axils of the leaves and fruit early in the season. They develop into minute, cicada-like jumping-lice. The young psyllas secrete a large quantity of honey-dew in which a peculiar black fungus grows, giving the bark a characteristic sooty appearance. There may be four broods annually and the trees are often seriously injured. After the blossoms fall, spray with kerosene emulsion,

diluted with 6 parts of water, or whale-oil soap, 1 pound in 4 or 5 gallons of water, or with one of the tobacco extracts. Repeat the application at intervals of 3 to 7 days until the insects are under control."

San José scale infests pears, but this enemy is controlled by up-to-date spraying methods with lime-sulphur, and needs no special treatment.

Fire blight has probably caused more injury to pears than any other one disease. It has an old history. It was known on the Hudson River as early as 1780. It is a disease associated with the indigenous wild crab apples and wild thorns of this country. It is of bacterial origin, and attacks the tree through the blossoms, through the young shoots, and through abrasions or breaks of the bark. There is no easy method of treating or doping trees which will render them immune to pear blight. So far as we know at the present time, the only rational way is to destroy all sources of infection, clean out all diseased and cankered spots, then disinfect the cut surface with corrosive sublimate solution one part to one thousand of water. Hawthorns or other disease carrying trees near the orchard should be destroyed. During the growing season, every tree in the orchard should be inspected once a week, beginning with the fall of the blossoms. Water sprouts on the stumps should be removed. The greatest pains should be taken to disinfect the wound, and see that no diseased parts remain over from year to year.

The pear industry of California is threatened with extinction by this disease. A few growers are controlling it, but the great mass of the growers fail to realize the possibility of exterminating only by thorough sanitation.

PACKING AND MARKETING

Pears should be picked before fully colored and before they are fully ripe. Especially is this true of the Kieffer, which, if allowed to ripen on the tree, is very much poorer in quality than if picked somewhat early and ripened off the tree. The time to pick is when the pear will separate readily from the spur, if turned up. They should be immediately put into cold storage or a cool room. In no department of fruit culture has cold storage played a more important part than in pear culture. The condition of markets, often demoralized in the hot, humid seasons, affected especially the early varieties, like Clapp and Bartlett. The introduction of the refrigerator car and the cold storage warehouse has alleviated the situation wonderfully. The Atlantic Coast region has extended its planting in response to the better facilities for handling the fruit. Jersey City annually stores from 60,000 to 100,000 bushels of summer pears, from 30,000 to 60,000 bushels of later varieties, in addition to many cars of California pears. In Boston, Buffalo, and Philadelphia, large quantities of pears are also stored. Among the cardinal principles for the successful handling of pears are these: the fruit should be picked before mature, either for storage or for other purposes; it should be stored at the earliest possible time after picking. The hotter the weather the more quickly should it be gotten into storage. The best temperature is from 34 to 32 degrees Fahrenheit. The fruit should be stored in packages which will allow the

heat of the fruit to radiate readily, for a barrel of Bartletts in storage will ripen in the center before the whole mass is cooled down.

Wrapping is essential in the case of the finer grades of fruit. It protects from bruising, lessens the wilting and decay, and promotes bright color. It does not pay to store poor fruit. Fruit which is to go into storage must be handled in the best way in every respect.

Doings of Societies

MEETING OF AMERICAN CEMETERY SUPERINTENDENTS

This association met in its twenty-fifth annual convention in Philadelphia, September 12-15. Nearly one hundred and fifty members were present. The members of the association were entertained by the park and cemetery authorities of the city. In addition to the interesting visits to these institutions, the members of the association enjoyed visits to Thomas Meehan & Son's Nurseries, the Andorra Nurseries, Henry A. Dreer, Riverton, New Jersey, and to Wm. H. Moon Company. These important establishments are all within easy reach of Philadelphia, and furnished attractive and instructive study grounds for the visitors.

RAILWAY GARDENERS' ASSOCIATION

This is a comparatively new organization. It held its annual convention in Chicago. During the progress of the meeting, the delegates were the guests of Vaughan's Seed Store, and were invited to visit the nurseries and greenhouses of this firm at Western Spring, Illinois. The trip was made by special train, and the entire membership was entertained at luncheon prior to making a complete tour of the nurseries and trial grounds.

FRUIT AT THE NEW YORK STATE FAIR

The display of fruit at Syracuse was not quite equal to that of 1910. The principal interest in the fruit exhibition centered in the contest between the New York State Fruit Growers' Association and the Western New York Horticultural Society, for the prize of \$500. It was understood in the early part of the season that this prize would not be competed for, but later on, the program was changed, and the regular competition took place. The State Fruit Growers' Association was successful in winning the prize this year, as they were last season. It was given on the basis of the exhibit containing stronger educational features than its competitor.

The New York State Vegetable Growers' Association made its first exhibit, which aimed to demonstrate the best types of packages for the marketing of vegetables. This feature was very instructive.

The Canadian Horticulturist for September is devoted in large part to the packing and handling of fruit. It is an exceedingly creditable number, and one which will be of much service to fruit growers, especially to those who are interested in up-to-date methods of packing fruit.

Trade Papers

SALEM, MASS., August 31, 1911.

NATIONAL NURSERYMAN,
Rochester, N. Y.

Dear Sirs:

At the last meeting of the Ornamental Growers Association in New York, the following report was adopted:

"Report of the committee on periodicals.

This committee recommends that the trade papers be interviewed to ascertain their exact position individually regarding the publishing of trade prices and further regarding their practice of accepting or otherwise subscriptions from persons or firms other than those who are bona-fide nurserymen, florists, seedsmen or dealers, and further that this committee be instructed on behalf of the organization to request these trade papers to publish a disclaimer in each and every issue to the effect that all prices appearing in their advertising columns are intended for the use of the bona-fide wholesale trade only.

G. C. PERKINS,
J. W. MANNING,
HARLAN P. KELSEY,
Chairmen Committee."

I would greatly appreciate if you could let me have your views in line with the action of this organization,—there is an extremely strong feeling among the nurserymen of the country on the question involved and while there is latitude for considerable difference of opinion, it is well for all interested to get together and work out the matter for the benefit of all concerned.

I trust I may hear from you as early as possible so our report may be put in shape for the next meeting.

Thanking you in advance,

Yours truly,
HARLAN P. KELSEY.

We are thoroughly in sympathy with the feeling that suggested the adoption of the above report as it is perfectly in accord with the policy of the NATIONAL NURSERYMAN.

The NATIONAL NURSERYMAN is a trade paper, and we fully realize that the best interests of the nursery business are served by confining its circulation exclusively to the trade. All requests for sample copies and subscriptions are investigated and if from unknown parties their letter heads or business cards are requested to show they are entitled to become subscribers.

A glance through the pages of the NATIONAL NURSERYMAN will reveal the fact that there is no need for us to publish a disclaimer to the effect that all prices are intended for bona-fide use of the wholesale trade.

We never intentionally allow prices to be published in the advertisements,—occasionally, through oversight, when copy has been received late and not properly proof read, prices may have appeared in our columns. Such instances are very rare, and never have been repeated.

To many advertisers this policy may seem extreme and unnecessary but we are of the firm conviction that it is the policy serving the best interests of the trade at large.

Every nurseryman knows there is no fixed standard of nursery merchandise by which price will tell its real value and the publishing of prices would have a tendency to grade prices and quality down rather than up.

The sentiment of the American Association of Nurserymen as expressed at the conventions is plainly one looking to the elevation of the business and its various phases and may be summed up as follows:

Quality rather than over production.

Fair prices based on cost of production rather than on the individual nurseryman's necessity for selling at what he can get. Protection to the trade customer by preventing unfair competition such as results from selling to the retail customer at trade or near trade prices.

Our policy we believe to be in perfect harmony with these practical ideals so we feel confident of the support of the entire trade.

TRANSPORTATION MATTERS

Chairman Sizemore of the Transportation Committee reports the following action of the Western Classification Committee, in regard to items interesting to the nurseryman. No. 1950. This item now reading "prepaid" was changed to read "prepaid or guaranteed." Nos. 1951-1962, as docketed, were also adopted. The above is the report of Mr. B. C. Stevenson, assistant freight traffic manager on the Chicago & Alton Railway Company.

Mr. Sizemore in acknowledging this writes as follows:

We are glad to learn that changes as desired by us were adopted by your committee. Kindly advise if the prepaid requirement regarding peach stones No. 2147 was also changed to read "Prepaid or guaranteed." Advise us further what was done with the apple seed proposition that I spoke to you about and before the committee. As apple seed are not mentioned at all in Part 2, No. 2151 which reads, "Seeds not otherwise indexed by name in bags, barrels or boxes, first class," if that goes into the new Classification as it now reads, we will have to pay first instead of third class as formerly.

If you remember, you said that you had made a note of the apple seed question. You stated that, if the whole paragraph could not be changed, you would try and handle the apple seed separately.

MR. CHAS. SIZEMORE,
Stark Bros. Nurseries & Orchards Co.,
Louisiana, Mo.

Dear Sir:

Referring to your letter of the 12th: In my letter of the 6th I should have stated that No. 1950 now reading "prepaid" was changed to read "prepaid or guaranteed." Likewise item 2147 covering peach stones.

The committee was not disposed to put in a separate item on apple seeds, as that subject was not on the docket. I would suggest that you docket the matter for consideration at the next meeting of the committee.

Yours truly,
B. C. STEVENSON,
Ass't Freight Traffic Mgr.

EUROPEAN NURSERY STOCK

The season seems to have been very much out of joint in France and Germany, if we are to believe the reports which come to us from various sources. A prolonged drought was felt throughout Germany, especially in the northern portions, and this spread across Alsace and into the valley of the Loire. The effect of this drought, of course, was the shortening of growth of all kinds of crops, and it is reported that nursery stock suffered severely. Authentic reports are not yet available. All this would suggest that fruit stocks and the import goods will be higher than usual.

Our Book Table

ALPINE FLOWERS AND GARDENS, by G. Flemwell. 6 x 9 in. 167 pages. Published by The MacMillan Co., New York. Price \$2.00.

The demand for works on flowers and gardens which are of themselves ornate and artistic is given additional emphasis by the appearance of this beautiful volume. Other works of its type are "The Flowers and Gardens of Japan," "The Gardens of England,"

"Dutch Bulbs and Gardens," and "The Garden That I Love." These

are all sumptuous works in which the artist and the bookmaker have combined in an effort to turn out a beautiful product of bookmaking art.

"Alpine Flowers" lives up to the high standard set by the others. It is

introduced by a pleasant preface contributed by Henry Correvon of Geneva, Switzerland. The

fact that this is presented in the native language of the writer, does not detract from its purpose. The Alpine

flowers are always of prime interest to the English traveler, less so,

I fear, to the pleasure-seeker from America; and many English travelers

in going from point to point do so with due observance to the floral exhibits which each region

brings forth. The great natural show of narcissus at Glion attracts many

visitors, as do the primulas of Les Plans, and the crocus of the Lake

Geneva region. When we say that the volume, beautifully illustrated by

colored plates depicting scenes and flowers peculiar to the Alpine region, is a simple

appreciation of the flower denizens of the Alps, we have covered the ground in a somewhat prosaic way, but have

hardly rendered justice to this attractive volume.

DISEASES OF CULTIVATED PLANTS AND TREES, by George Massee. 5 x 8 in. 602 pages. Published by The Mac

Millan Co., New York. Price \$2.25.

Plant pathology is a comparatively new science. A

quarter of a century ago the plant doctor was not known, and the mycologist, as he was then called, concerned himself largely with studies of mushrooms, corn smut, wheat rust, and the like. The diseases of fruits, vegetables, and flowers represented unexplored avenues.

Not long ago, we noted in these columns the appearance of an important volume on the diseases of plants by Dr. Duggar. This paragraph is to record the appearance of another volume, the title of which is given above, in which

the diseases of cultivated plants and trees are discussed in the light of the latest knowledge available on the subject. Mr. Massee has taken up in addition to the recognized diseases themselves a discussion of various troubles more or less understood which affect trees and plants. Among these difficulties are noted the following: stag-head trees, chlorosis, or the disappearance of the green coloring matter of plants, fasciation, injuries due to and arising from frost, hail, smoke, gases, and the like.

The volume is prefaced by a general discussion of the relation of diseases to environmental conditions, as climate and treatment. Then follows an academic discussion of fungi, which is of special interest to the student. The body of the book is made up of accounts of the life histories of the principal diseases of the cultivated plants. The descriptions are technical and will be better appreciated by the student in mycology than the practical gardener. The volume is supplied with an

excellent index and well illustrated.

William H. Moon, of the Wm. H. Moon Co., Glenwood Nurseries, Morrisville, Pa., called at the office of the National Nurseryman the last week of September.

ANNOUNCEMENT

Conyers B. Fleu, Jr., formerly with the Tree Seed Department of Thomas Meehan & Sons, desires to announce the establishing of a high-grade Tree Seed Business.

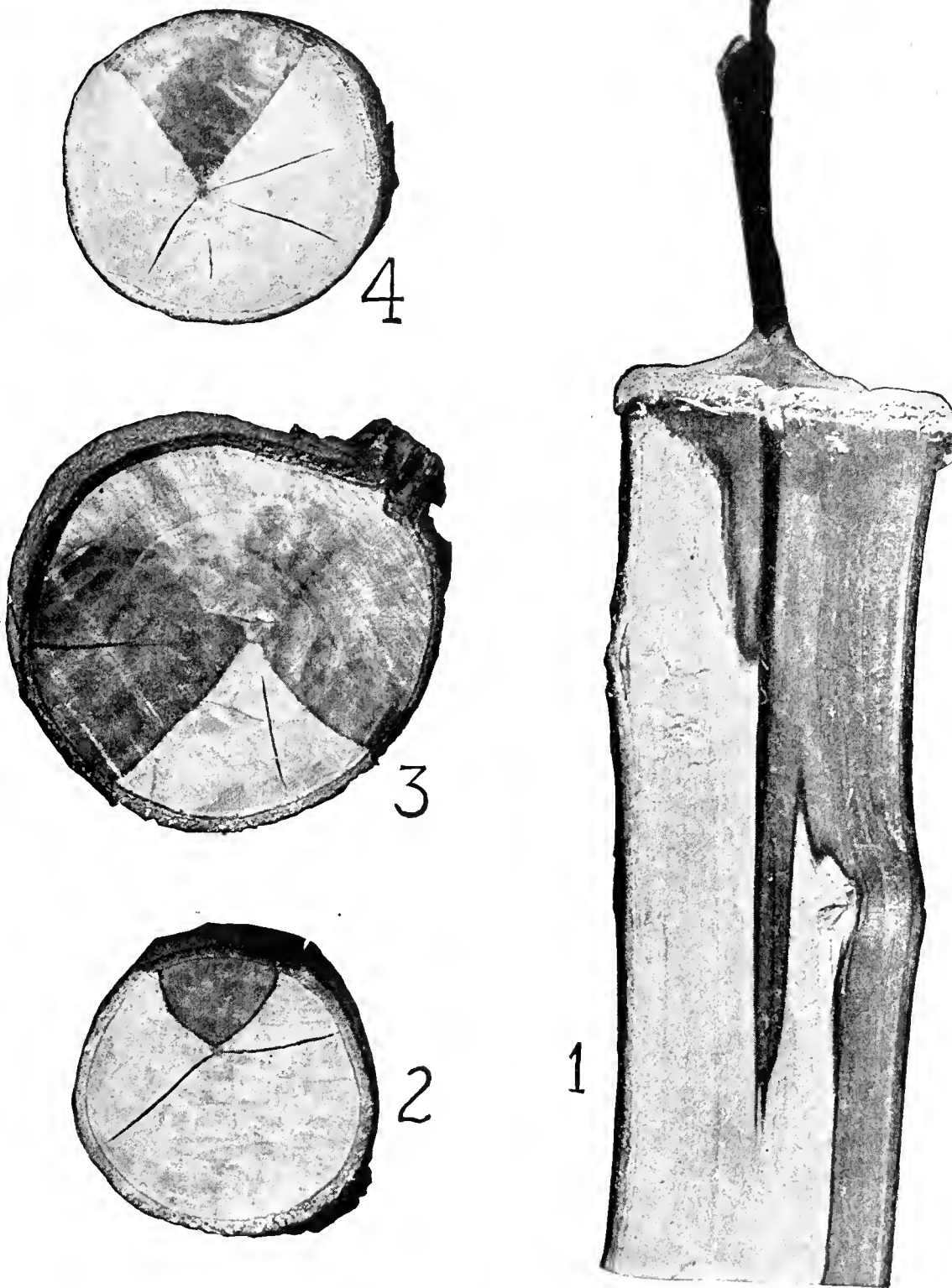


PLATE XIV.—PEAR STOCKS AFFECTED WITH CANKER.

1. Longitudinal section of specimen shown in Plate XIII. 2. Cross-section of same two inches from lower end of canker. 3 and 4. Cross-sections of other stocks. (All figures natural size.)

IN THE SENATE OF THE UNITED STATES

JUNE 23, 1911

Mr. Burnham introduced the following bill; which was read twice and referred to the Committee on Agriculture and Forestry

A BILL

To regulate the importation and interstate transportation of nursery stock, to enable the Secretary of Agriculture to establish and maintain quarantine districts for plant diseases and insect pests, to permit and regulate the movement of fruits, plants, and vegetables therefrom, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress Assembled, That it shall be unlawful for any person, firm, or corporation to import or offer for entry into the United States from any foreign country any nursery stock unless and until a permit shall have been issued therefor by the Secretary of Agriculture, under such conditions and regulations as the said Secretary may prescribe, and unless such nursery stock shall be accompanied by a certificate of inspection in manner and form as required by the Secretary of Agriculture from the proper official of the country from which the importation is made to the effect that the stock has been inspected and found free from injurious plant diseases and insect pests: (From this to end of paragraph not in House bill.) *Provided*, That this section shall not be construed as applying to plants or plant products solely intended for and adapted to use as food, but to nursery stock or other plants or plant products for propagation: *Provided further*, That nursery stock may be imported for experimental or scientific purposes, without the certificate of inspection or the permit of the Secretary of Agriculture heretofore required, upon such conditions and under such regulations as the Secretary of Agriculture may prescribe: And provided further, That nursery stock imported from countries where no official system of inspection for such stock is maintained, may be admitted upon such conditions and under such regulations as the Secretary of Agriculture may prescribe.

SEC. 2. That it shall be the duty of the Secretary of the Treasury promptly to notify the Secretary of Agriculture of the arrival of any nursery stock at ports of entry; that the person, firm, or corporation receiving such stock at port of entry shall (House Bill reads: That the importer of such stock shall immediately upon entry etc.) immediately upon entry and before such stock is delivered for shipment or removed from the port of entry, advise the Secretary of Agriculture or his agent designated for the purpose in the State to which such nursery stock is destined, as the Secretary of Agriculture may elect, of the name and address of the consignee, the [nature and] (not in House Bill) quantity of stock it is proposed to ship and the district and country where grown; that no person, firm, or corporation shall ship or offer for shipment to any common carrier, nor shall any common carrier transport or receive for transportation, any nursery stock imported into the United States from one State or Territory or the District of Columbia into another State or Territory or the District of Columbia without notifying the Secretary of Agriculture or his agent designated for the purpose in the State to which such nursery stock is destined, as the Secretary of Agriculture may elect, immediately upon the delivery of the said stock for shipment and before transportation is begun, of the name and address of the consignee, of the [nature and] (not in House Bill) quantity of stock it is proposed to ship, and the country and district where the same was grown.

SEC. 3. That no person, firm, or corporation shall import or offer for entry into the United States any nursery stock unless the case, box, package, crate, bale, or bundle thereof shall be plainly and correctly marked to show the nature [and quantity] (not in House Bill) of the contents, the country and district where the same was grown, the name and address of the shipper, owner, or person shipping or forwarding the same, and the name and address of the consignee.

SEC. 4. That no person, firm, or corporation shall ship or deliver for shipment to any common carrier, nor shall any common carrier accept for transportation or transport from one State or Territory or the District of Columbia into another State or Territory or the District of Columbia, any nursery stock, the case, box, package, crate, bale, or bundle whereof is not plainly (House Bill says "Plainly and correctly

marked") marked so as to show the nature [and quantity] (not in House Bill) of the contents, the name and address of the consignee, and the country or district where such stock was grown.

SEC. 5. That the Secretary of Agriculture be, and he is hereby, authorized to make such rules and regulations as may be necessary for carrying out the purposes of this Act.

SEC. 6. That whenever, in order to prevent the introduction from any foreign country into the United States of any tree, plant, or fruit disease, or of any injurious insect, the Secretary of Agriculture shall determine that it is necessary to forbid the importation into the United States of nursery stock or of any class of fruits, vegetables, bulbs, plants, and seeds from a country where such disease or insect infestation exists, he shall promulgate such determination, specify the country and district, and the nursery stock or the class of fruits, vegetables, bulbs, plants, or seeds which, in his opinion, should be excluded, and, following the promulgation of such determination by the said Secretary and until the withdrawal of the said promulgation by him, the importation of nursery stock or of the class of fruits, vegetables, bulbs, plants, or seeds specified in the said promulgation, from the country and district therein named, regardless of the use for which the same is intended, is hereby prohibited, and until the withdrawal of the said promulgation by the said Secretary, and notwithstanding that such nursery stock, fruits, vegetables, bulbs, plants, or seeds be accompanied by a certificate of inspection from the country of importation, no person, firm, or corporation shall import or offer for entry into the United States from any foreign country specified in such promulgation any of the nursery stock or of the class of fruits, vegetables, bulbs, plants, or seeds named therein, regardless of the use for which the same is intended.

(House Bill says, and following the words:—"and he is hereby authorized, within thirty days, next following the promulgation of such determination and for such length of time thereafter as in his judgment is necessary, to deliver or refuse to deliver, as in his judgment is proper, permits for the importation of nursery stock or of the class of fruits, vegetables, bulbs, plants, or seeds specified in his promulgation from the country and district therein named, and after the promulgation of such determination by the Secretary of Agriculture and until the withdrawal of the same by him, no person, firm or corporation shall import or offer for entry into the United States from any foreign country specified in such promulgation, any of the nursery stock or of the class of fruits, vegetables, bulbs, plants, or seeds named therein, unless or until a permit therefor has been first obtained from the Secretary of Agriculture.")

SEC. 7. That the Secretary of Agriculture is authorized and directed to quarantine any State or Territory or the District of Columbia or any portion thereof, when he shall determine the fact that a dangerous plant disease or insect infestation exists in such State, Territory, or District of Columbia; and the said Secretary is directed to give notice of the establishment of such quarantine to common carriers doing business in or through such quarantined area, and shall publish in such newspapers in the quarantined area as he shall select notice of the establishment of quarantine; that no person, firm, or corporation shall ship or offer for shipment to any common carrier, nor shall any common carrier receive for transportation or transport, nor shall any person, firm, or corporation carry or transport from any quarantined State or Territory or the District of Columbia, or from the quarantined portion thereof, into or through any other State or Territory or the District of Columbia, any nursery stock or any fruits, vegetables, bulbs, plants, or seeds, except as hereinafter provided; that it shall be unlawful to move, or allow to be moved, any nursery stock, or any fruits, vegetables, bulbs, plants, or seeds [specified in the notice of quarantine heretofore provided, and regardless of the use for which the same is intended] (not in House Bill) from any quarantined State or Territory or the District of Columbia, or quarantined portion thereof, into or through any other State or Territory or the District of Columbia, in manner or method or under conditions other than those prescribed by the Secretary of Agriculture; that it shall be the duty of the Secretary of Agriculture to make and promulgate rules and regulations which shall permit and govern the inspection, disinfection, certification, and method and manner of delivery and shipment of nursery stock, or any fruits, vegetables, bulbs, plants, or seeds [specified in the notice of quarantine heretofore provided, and regardless of the use for which

the same is intended,] (not in House Bill) from a quarantined State or Territory or the District of Columbia, or quarantined portion thereof, into or through any other State or Territory or the District of Columbia; and the said Secretary shall give notice of such rules and regulations as hereinbefore provided in this section for the notice of the establishment of quarantine.

SEC. 8. That whenever in this Act the term "nursery stock" is used it shall be construed as including field-grown florists' stock, trees, shrubs, (House Bill says "plants") vines, cuttings, grafts, scions, buds, fruit pits, [seeds, or other plants or plant products for propagation, unless otherwise provided herein.] (House bill says "or seeds of fruit and ornamental trees or shrubs").

SEC. 9. That any person, firm, or corporation who shall violate any of the provisions of this Act, or who shall forge, counterfeit, alter, deface, or destroy any certificate provided for in this Act or in the regulations of the Secretary of Agriculture, shall be deemed guilty of a misdemeanor, and shall, upon conviction thereof, be punished by a fine not exceeding five hundred dollars, or by imprisonment not exceeding one year, or both such fine and imprisonment, in the discretion of the court, and it shall be the duty of the United States Attorneys diligently to prosecute any violations of this Act which are brought to their attention by the Secretary of Agriculture or which come to their notice by other means.

SEC. 10. That there is hereby appropriated, out of the moneys in the Treasury not otherwise appropriated, to be expended as the Secretary of Agriculture may direct, for the purposes and objects of this Act, the sum of twenty-five thousand dollars, which appropriation shall become available on _____, nineteen hundred and _____.

[SEC. 11. That this Act shall become and be effective from and after the first day of July, nineteen hundred and twelve.] (Not in House Bill.)

NATURE AN EXHIBITOR

Millions of Americans have told themselves for years past that some day they intended to visit California. That day will probably be for many of them, in 1915, when there will be two Panama Expositions in California, an international and business event in San Francisco, and a unique, interesting, human-interest attraction in San Diego. Let the men of business go north if they will; those who enjoy a pleasant climate and entertainment more than the serious side of life will hie themselves to the delightful city of San Diego, if indeed everyone does not attend both expositions, as they really should. It has been promised for the transportation lines that unexampled rates will be made for travelers to the expositions, and they will have the advantages of seeing exhibits grander than any works of man—the Grand Canyon of the Colorado, the Yosemite Valley, the Big Trees, and all the wonders and delights of that wonderful State, California. Nature, it may be said, will be the greatest and most popular exhibitor of all those at the exposition.

INTERESTING LATIN-AMERICA

The average person in the United States knows very little about the lands to the southward—Mexico, Guatemala, Nicaragua, Venezuela, Chile, Brazil; twenty republics of vast resources and wonderful potentialities. They are populous, rich, and enterprising, and their great cities compare favorably with the best in Europe and the United States of North America. Statistics could be given here to show how rapidly these countries are progressing in the arts of peace and civilization. It is these countries that San Diego invites to join with it in making a great exposition in 1915. Congress has sanctioned the President to issue the invitation. Brazil did not wait for formalities but, through her special commissioner, announced her readiness to participate. The other nations will doubtless follow the example of Brazil.

Fruit and Plant Notes

NEW YORK EXPERIMENT STATION ON CROWN GALL

Crown Gall, *Bacterium tumefaciens* Smith & Town. In New York, the so-called crown gall or root gall disease is common on apple trees as well as on several other woody plants. In the mind of the planter the question naturally arises, What effect will the galls have on the future growths of the trees? During twelve years' acquaintance with apple discases in New York the writer has never seen or known of a well authenticated case in which crown gall has injuriously affected apple trees in the orchard. The results of the following two experiments recently reported by the writer tend to support the view that crown gall, as it affects the apple, is an unimportant disease in New York. "In 1899, C. H. Stuart & Co., Newark, N. Y., set out an experimental orchard of 500 trees, mostly Baldwins, all affected with crown gall. The trees have now been set nine years. Under date of January 20, 1908, Mr. Stuart writes as follows: 'The trees today show as good a growth as the trees planted the same time and free from crown gall. The bark is smooth, healthy in appearance, and the trees look thrifty and vigorous.' An experiment made by the Station bears on this point. In 1901, we planted twenty-two apple trees affected with crown gall, to determine the effect of this disease upon the growth of the trees. The trees were three years old. The galls varied in size from one to two inches in diameter and were located mostly on the tap-root, but in a few cases on lateral roots. Some of the trees had several galls each. We believe the galls were typical of those commonly found on apple trees in New York nurseries. Five of the trees were dug in 1903, five in 1905 and the remainder in 1907. In no instance was there any evidence that the galls had increased in size or number, or that they had been in any way injurious to the trees. Probably apple trees bearing large galls should be rejected, but unaffected trees from the same lot may be planted without fear of bad results."—N. Y. Expt. Sta. Bull. 328.

CHERRIES RECENTLY ORIGINATED BY MR. BURBANK

Late Napoleon and South Giant are new cherries which Mr. Burbank claims are valuable and has recently sent out from his grounds at Santa Rosa. The reports say that Late Napoleon, combining the desirable commercial characteristics of the Royal Ann with a later ripening season, is very promising, while South Giant averages over an inch in diameter, and has the smallest stone of any of the large cherries. It appears to surpass the popular black cherries in many of their best characteristics. This is probably a seedling of the Early Burbank, which proved to be an unusually good early black cherry.

CALIFORNIA DECIDUOUS FRUITS

California deciduous fruits brought very low prices in the eastern markets during the fore part of September, largely owing to the fact that the California season was late, while in the East fruits are ripened earlier than usual, caused badly overcrowded markets. Early in the season, shippers were paying unusually high prices for pears and peaches, so the growers have benefitted largely so far, while some of the larger shipping companies will be heavy losers. The outlook for high prices on California grapes is not encouraging, as there are large crops in the East.

INTERCROPPING THE ORCHARD

Mr. Richardson (Kansas): Really I am not prepared at the present time to give before the Society what I believe will be the result, but I can describe the experiments I am making. About five years ago, the subject came up, whether it would be profitable or injurious to grow alfalfa in an orchard. The matter was taken up with Prof. W. A. Taylor, and he stated it was his opinion that it would be detrimental; and I took it up also with W. A. Barnes, who condemned the practice. However, I sowed five acres in the month of August. The following spring I planted five acres in trees. The first year we got three crops of alfalfa, leaving about two to three feet in the tree row, which I had the men with their scythes cut to mulch these trees. The next year I got four crops, and this past year I got five crops. These trees have made a most wonderful growth. The circumference of the stems ranges from twelve to thirteen inches. It is demonstrated beyond a doubt that we can have tree growth, and we have had fruit for two years on Jonathan, Missouri Pippin, and Wealthy; and I find this, that the mulching of these trees with a strip three feet wide has a tendency to prevent growth of weeds and grasses. In the fall, we remove this mulch, and wrap the trees to prevent the ravages of rabbits, and also of the flat-headed borer. We haven't practiced spraying. I wanted to see what results we would get from leaving the orchard to take care of itself. I believe that we all agree that red clover is one of the best cover crops we can grow in an orchard. The theory I advanced in sowing alfalfa is that the roots penetrate beyond the depth of the tree roots, while clover really vies with the roots of the apple tree for their moisture and substance. I believe I could recommend, at least, to grow this with trees until they reach an age of bearing; and if, after that, it becomes necessary to turn under this alfalfa, we have accomplished one result, at least,—we have made the ground profitable up to the bearing period of the tree, with \$25 or \$30 an acre. I can see no reason why I should plow up this ground at the present time. But we shall hope to carry this experiment on farther, and I am keeping a very accurate record. As a check, I planted a plot of about three hundred trees on ground where we practiced clean cultivation.

Professor Van Deman: I will mention two cases with which I am acquainted of alfalfa in orchards. You perhaps have all read of, and some have seen the orchard of Mr. Grant T. Hitchings near Syracuse, New York. This last year I made a visit there, and he has a young orchard in alfalfa, about five or six years planted, that is certainly doing well. The growth was good, the color was good, and the alfalfa was good. Mr. Mike Horan of Wenatchee, Washington, is one of the good fruit growers of that great belt, and he practices the plan of growing alfalfa in his orchard up to bearing age. He told me last fall that it is his common practice to grow alfalfa, but he doesn't mow it. Mr. Horan runs a disk harrow over his alfalfa, and chops it up just as much as possible several times during the growing season. He thinks that is as good a way to treat an orchard as the clean culture method; and better. His trees are certainly in fine condition.

President Goodman (to Mr. Richardson): You take your clover off?

Mr. Richardson: Yes, it brings a revenue.

Mr. Rowe: I believe one of the most serious mistakes fruit growers have made is attempting to grow a money crop of any kind in an orchard. I find it from the Atlantic to the Pacific, and from the North to the South. Our men who have been in the business the longest, after years of trying to grow crops, and really making money out of crops, have discarded them, and have found that they have been losing money instead of making money. I want to refer to one grower as an example, Mr. Sessions. He has been in the business a great many years. He has peach orchards on his place twenty-five years old in sound and perfect condition. He does not under any circumstances grow any crop to take off from the ground; but he does, during the first four years on the peach orchard, and the first five years on the apple orchard, plant rye and sand vetch in the orchard, and plow it under. He cultivates five feet each side of the tree, up to the first of June, then sows the space, and continues to cultivate up to five feet till the middle of September. Then again, early in spring, about the middle of May, he goes through and turns the rye and vetch under. He cultivates for about six weeks all the ground, then plants again. When he begins to get fruit, he gets four and five times as much fruit and better fruit and better prices than his neighbors who grow corn and potatoes in their orchards. There is absolutely no question about the practice in that section of the country. The only man today who grows crops in the orchard to get money while developing it is the fellow who actually has to do it to have bread to live on.

Mr. Von Herff: I would like to ask Professor Van Deman what his experience is in raising cotton in his pecan orchard in Louisiana.

Professor Van Deman: The boll weevil has about done us up on the cotton business, but until the boll weevil came, we found no trouble whatever with the pecan trees in the cotton field.

President Goodman: The character of the soil is the controlling factor. Associated with this is the question of moisture. With rich soil and plenty of moisture, intercropping is generally successful.

Mr. Richardson: The soil is loess soil. There are only a few places in the world where they have it. I want to ask if there is not a difference between a leguminous plant, and wheat, corn, rye, or oats.

President Goodman: Yes.

Mr. Lake: I want to call your attention to the fact that Mr. Van Deman lost track of the sense of the point. There is an abundance of water in the Hitchings place. There is no question about growing alfalfa in irrigated sections, where there is plenty of water. But you don't do it unless you have to. I think it is heresy to talk like this about growing crops in an orchard.

Mr. Temple: As to the heresy of growing paying crops in an orchard. One of the finest orange groves I know in Florida is distinctly a by-product of a vegetable farm. The vegetable farm is the original proposition, and the owner planted orange trees at their regular distances in his vegetable patch. When his trees got too big, he planted more vegetables and more orange trees, and has forty acres of orange groves that can't be excelled, and his oranges netted him \$2.85 on the tree last year.

Professor Van Deman: Mr. Horan was not growing a crop in his orchard that he was cutting and saving. He was simply working that alfalfa back into the ground by cutting it up with disk implements. In the case of Mr. Hitchings, he was not taking the crop off, but cutting alfalfa and mulching the trees with it. I have been hotly opposed to the growing of farm crops in an orchard where they were robbing the trees.

Mr. Rowe: I believe that man's success was in spite of his heresy. Had he cultivated, he would have had a better orange grove.

Mr. Burson: In one grove, I raised vegetables, and that is the best grove I have. Why? The reason is this. We can't grow vegetables here on this poor land without using lots of fertilizer. While you are using fertilizers for your vegetables, your trees get some of it; and you have to cultivate your vegetables if you grow them, so the trees get cultivated. You raise an orange grove, and it doesn't cost you anything.

Mr. Rowe: The reason for not planting other crops is not so much for lack of fertility. Perhaps you are all familiar with experiments conducted by Prof U. P. Hedrick in the state of Michigan, showing that a tree has its likes and dislikes, as well as a person. His experience lasted over a period of three years, and trees were planted with oats, with potatoes, with tomatoes, and with the different legumes, and it was found that the trees liked some of the plants, and the roots would interlace; but when they liked them, they liked them too well, and would grow too fast. Some of the others would not grow together. It shows that a fruit tree does not like to associate with the different plants of the vegetable kingdom, and that we should not grow crops in the orchard, but give it a home of its own.

Professor Reimer: I want to say one word for the South in this matter. The soil used in the South for most of the fruits is extremely poor, and we have found that cultivation with the common fruits is absolutely necessary for the best results on the average southern soil. We are not growing fruits here on the soils you are in the North and West.

President Goodman: Cultivation is the best plan to manure soil. It is the best fertilizer you can give your soil. We stand adjourned to meet on board the boat tomorrow morning at 7:30.—1911 *Report Amer. Pomological Society*.

NATIONAL NURSERYMAN:

"Enclosed please find New York exchange draft for \$1.00 covering subscription to your valuable journal which I would not think of doing without."

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"We find your paper very interesting."

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NATIONAL NURSERYMAN:

We have been away from our office attending our Annual Horticultural Fair, where our product took first premium. The NATIONAL NURSERYMAN certainly brings the inquiries and from the men who buy, too. Wishing you the success that you so well deserve, we are, respectfully,

Ind.

GRAY'S NURSERY, Aloid G. Gray, Mgr.

Obituary

FRANCIS O. CANNING

On September first, by accidental poisoning by eating mushrooms at Villa Nova, Pennsylvania. Mr. Canning for a number of years was gardener to the Massachusetts Agricultural College at Amherst. He was well grounded in systematic botany, and a good practical horticulturist. He is survived by his wife and a sister in Philadelphia, and a brother, Edward J. Canning, who is instructor in horticulture at Smith College, Northampton, Massachusetts.

A TRIBUTE TO MR. HEIKES

The Horticulturists and Nurserymen of this country will regret to learn of the death of Maj. W. F. Heikes, manager of the Huntsville Wholesale Nurseries, who died in Cleveland, Ohio, Friday, August 25th, after a very brief illness. The funeral was held in Huntsville, Alabama, where he had been a resident since 1872. The funeral was largely attended by his fellow nurserymen from many of the Southern States. The floral designs were very numerous and beautiful, bespeaking the admiration that his many friends had for him. All who came in contact with him learned to love him for his quiet reserved manner and intense interest in all that pertained to Horticulture.

Major Heikes was president of the Alabama State Horticultural Society since its organization in 1903 and his presidential addresses have been splendid contributions to the Horticultural literature of the State and South. His loss will be severely felt by the Society, as he gave it more than usual attention and encouragement.

Madison County, in which the Huntsville Wholesale Nurseries is located, is today one of the largest fruit tree nursery sections in the United States. The success of this industry in that locality can be attributed for the most part to the pioneer work of Mr. Heikes.

Mr. T. J. O'Harra will conduct the business of the Huntsville Wholesale Nurseries along the lines which Mr. Heikes developed.

P. F. WILLIAMS,

Professor of Horticulture, Alabama Experiment Station.
Auburn, Ala., Sept. 14th, 1911.

AUTUMN

We hardly know what best typifies the fall of the year. Sometimes we think a field of shocked corn with ripe pumpkins scattered around best does it; that when we go into the orchard and see a Wealthy apple tree loaded down with ripe red fruit, that's it; that when we get off half a day and land a string of black bass from the pool up in the woods, that's fall doings; that when we run across a hedgerow of goldenrod and wild aster or some fringed gentian down by the creek, and see the blood red south side of some jack oak, or flush a covey of quail, or see a lot of robins stripping the last of the fruit from the black cherry, or have some candidate for county office come around, then we know fall is here, or, better yet, when the evening lengthens out, and a little fire seems pleasant, and pumpkin pies get on the bill of fare, and one hates to get up in the morning, there is no question but the summer has gone and winter is not very far away.—*Exch.*

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Western Association of Nurserymen—President, Geo. A. Marshall, Arlington, Nebr.; secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets annually second Wednesday in December.

THE LATEST FEDERAL INSPECTION BILL

On June 23d, a modified Simmons bill was introduced by Mr. Burnham in the United States Senate. This is known as S 2870. It has been carefully compared with the original bill by Mr. Thomas B. Mehan, who says that while there are changes in the wording, "the intent and purpose of this bill does not alter the situation. So far as I can see, it is practically the same thing with a few minor changes in the wording." We have recently learned that the author of the bill, Mr. Simmons, is working up a mailing list of the orchardists of the country, to whom he can send copies of the bill, for the purpose of securing their support. In other words, an active campaign is being waged. This preliminary work has been placed in the hands of Mr. Simmon's secretary, who resides in Niagara County, New York. We give this information for the purpose of informing our nursery friends that the measure is not dead by any means, and that it would be wise for those interested in its welfare to attempt to secure a conference with the promoters of the bill with a view of eliminating objectionable features or modifying it, if necessary, to the advantage of the nurserymen. We publish the bill on another page as it has been recently introduced, calling attention to the changes which have been made in the original.

FRUIT INSPEC- TION IN THE DOMINION OF CANADA

It is well known that Canada has been exporting her apples for a number of years under the provisions and regulations of the Fruit Marks Act. This act provides for the inspection of all fruit in closed packages. The inspection work was instituted some five or six years ago, at first not very rigidly, but as time went on the provisions of the act were more strictly enforced. It is significant that this year an amendment to the inspection and sales act has been passed by the Canadian house, which covers all fruit packed and offered for sale, either wholesale or retail, in the domestic markets, as well as for export. This is an important step, and means that no fruit offered for sale in any store or in any part of the Dominion shall be exempt from the provisions of the inspection act. The *Canadian Horticulturist* has the following to say in regard to the passage of this act:

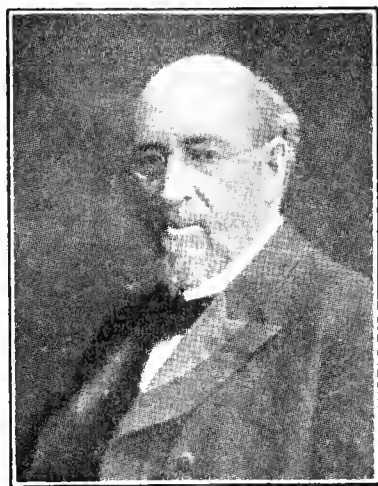
"This amendment has long been needed. Fruit that unscrupulous packers feared might not get past the fruit inspectors, if shipped for export, has been unloaded on the home markets, including the west, with the result that the cries of protest by the Canadian consumer have been steadily increasing in volume. The happy days of the dishonest packer in Canada are drawing to a close. The end cannot come too soon. It is unlawful now to mark or cause to be marked a wrong name, or the name of any person or firm, other than the one who actually packed the package. Thus are the opportunities of escape from detection being closed."

SELLING AMERICAN APPLES IN BRITISH MARKETS

As most people are aware the great mass of American apples are sold at auction in the British markets. Theoretically this system is the most satisfactory that can be employed. Practically there is much dissatisfaction in its use. It is a

system which fails to discriminate sufficiently between grades expressing quality and types of fruit. At a late meeting of the Ontario Fruit Growers' Association, a prominent jobber expressed the opinion that the ideal method entails the establishment of an American depot or distributing warehouse in each of the English cities. He believed that if such a warehouse, equipped with cold storage facilities, were established, where consumers were taught to realize that they could depend upon a continuous supply of good fruit, that such a system would engender confidence and vastly stimulate the sale and distribution of American fruits at better prices than are now secured. His plan was to organize a delivery system, direct from the warehouse to the consumer. This would be by means of delivery vehicles, either hand carts, such as are frequently used in the European cities, or wagons, after the American fashion, but by such means as would bring to the consumer fruit carefully graded, either in bulk to be sold by the pound, or in uniform packages of small size. His estimate was that apples could be sold profitably at 3 d. per pound for the better grades, and that at this figure it would return a net price of \$3.70 per bbl. This assumed that the cost of selling would amount to \$1.00 per barrel and the cost of carriage would amount to about the same thing.

There is no doubt that while such a scheme would bring the producer and consumer very close together and eliminate the profits of the middle man to a large degree, it would at the same time arouse the keen opposition of the produce trade, and we can easily conceive that a company or organization attempting such a trade in England would meet with very determined competition from those already established in the trade. Nevertheless, there is much in the scheme to command attention and probably enough in it to warrant a careful trial being given.



LEWIS CHASE
The Dean of Rochester Nurserymen

VETERANS MOVING ON

Within the past six weeks, death has removed two very prominent figures from the ranks of the nurserymen of the country. These are Major W. F. Heikes of Huntsville, Alabama, manager and founder of the Huntsville Wholesale Nurseries, and Lewis Chase of the well known firm of Chase Brothers, Rochester. Mr. Heikes passed away during the last week of August, and Mr. Chase during the first week of September.

Mr. Heikes, the founder of the Huntsville Wholesale Nurseries, came from a family of nurserymen. His great-grandfather, Andrew Heikes, established a nursery business at Carlisle, Pennsylvania, in 1798. His son, George Heikes, moved to Dayton, Ohio, and there engaged in the nursery business in 1822, and is credited with being the first man to propagate trees west of the Alleghanies by the root grafting method. Jacob Heikes, a son of George Heikes, established himself in the nursery business near Dayton, Ohio, in 1839, and was succeeded by his son Mr. W. F. Heikes, in 1866. In response to the exceptional opportunity for the production of nursery stock in a wholesale way offered by the climate and economic conditions of Alabama, Mr. Heikes

moved to Huntsville in 1872, where he organized the well known Huntsville Nurseries, which have become so well known in the wholesale nursery world.

Few men have passed away whose removal has been so thoroughly regretted. Mr. Heikes was noted for his retiring, modest disposition, but at the same time, he possessed a quality of genial warmth which was soon recognized and always appreciated. The NURSERYMAN's office has received several impressive tributes to the worth and character of Mr. Heikes, both as a business man, and as a citizen. Prominent among these is one from past President W. P. Stark, whose business relations brought him very close to the deceased.

In the business world, Mr. Heikes may be said to be the father of standardization methods in the handling of nursery stock. He established shipping depots in different parts of the country, from whence his large stock of trees were distributed. These were always graded with great care, and in buying such stock nurserymen were satisfied that it was exactly as represented. The contribution which Mr. Heikes has made to the business aspects of the nursery industry will stand as a worthy monument to a life well spent. His business integrity, his patriotic interests in advancing the fruit interests of the country as a whole and Alabama in particular, for he was well known as the president of the State Horticultural Society, leave an enviable record, and a model for the young men of the country to live up to.

Lewis Chase might be regarded as occupying the place of the dean of the nurserymen of Rochester. He was born in Maine in January, 1830, at Chase Mills, named after the family. It was here that he began the nursery business in 1857, associated with his two brothers, Ethan A. and Martin B. In 1868 Ethan A. and Lewis Chase came to Rochester, New York, and established a nursery in that city. They were pioneers in the business along with Patrick Barry and George Ellwanger. The firm was incorporated in 1878 under the name of Chase Brothers Company. Lewis Chase was elected president, and he held this office until his death, so that he remained in the harness, an original member of the firm, until the time of his passing at the age of eighty-one years. Mr. Chase is succeeded in the business by his children and grandchildren. He was even permitted to see two great-grandchildren. He was a member of the American Pomological Society, of the American Association of Nurserymen, the Western New York Horticultural Society, and expressed his interest in progressive horticulture by being constantly on the alert to adopt up-to-date methods in the growing of stock and the suppression of enemies which preyed upon it.

J. A. Lopeman, of the Enid Nurseries, Enid, Okla., left 29th of August for a trip to Denver, Salt Lake City, Yellowstone Park and Idaho points. His orchard interests are beginning to require careful attention. Western orchards are an assured success—a good investment. Mr. Lopeman expects to return to Enid about October 1st.

FOURTH NATIONAL APPLE SHOW, SPOKANE

SPOKANE, WASH., Sept.—Five hundred dollars in gold and a massive silver loving cup, suitably engraved, presented by the International Apple Shippers' association, will be awarded to the exhibitor of the best packed carload entered at the fourth National Apple show in Spokane, November 23 to 30. The total value of the prizes and premiums is \$20,000. The judges will award prizes of \$300 to firsts and \$100 to seconds in carload contests on each of these varieties: Jonathan, McIntosh Red, Rome Beauty, Spitzenberg, Wagener, Winesap, Yellow Newton, also on the best mixed car of standard winter varieties, each to consist of at least 50 boxes, and the best car of any standard variety not named in the foregoing. A special premium of \$200 is offered for the most artistically decorated entry in the carload class.

"The trustees think this arrangement of the carload prizes will be more satisfactory to all the growers and districts than was possible by the terms of the championship contest, which was heretofore a feature," said Harry J. Neely, first vice-president of the National Apple Show, Inc. "The championship prize was \$1,000. It is possible for an exhibitor to receive a similar amount, besides gaining three distinct honors: Winning first on pack, first in his class on variety, and first for decorative features. Another thing is that certain varieties will not be forced into competition under a handicap because of the higher quality rating of other apples."

The carload contest calls for entries of 630 boxes or 210 barrels. The exhibitor must be the owner, lessee, or authorized agent of the land where the apples were grown and give a sworn statement when making entry that the apples were grown in one orchard. The judges will consider quality, color, size, uniformity, condition, and pack in scoring to make their awards.

Another competition is to bring out originality in design and attractiveness of display, not necessarily of a commercial value, and is open to associations, districts, lodges, societies or unions having a membership of more than five persons. Two hundred dollars will be awarded for the most unique and artistic display, the second prize being \$100. Wide latitude is allowed in designs and decorations.

There also will be a similar contest, open to individuals, the first prize being \$200, with \$100 for the second. These displays will be passed upon by a committee of special judges, who will consider only the merits of the unique and artistic sides of the exhibits. As an added inducement the judges will award premiums of \$50 each to the five contestants whose displays rank closest to the winners of first and second prizes.

One hundred dollars to the first and \$50 to second is offered for general collective displays of apples grown on irrigated land and shown by commercial clubs, unions, associations, counties or districts, but not by individuals. The same provisions apply for the best general collective display of apples grown on non-irrigated land. The first prize is \$100, the second \$50.

Fifteen competitions are announced in the 10-box classes, taking in standard varieties, with first prizes of \$40 and \$20 to seconds, and added premiums for pack. There will be 15 competitions in the 5-box classes, with first prizes of \$25, and second prizes of \$15; also added pack prizes. An added contest in this class is for five varieties in as many boxes. The first prize is \$50 and \$25 for the second. In the single box class there will be 50 competitions, the varieties including 30 of the best known standard winter apples, with first prizes of \$10 and second of \$5. There will be additional prizes on pack.

Seventy-five dollars is offered for the heaviest pyramid of 50 apples, weight to determine the award, with \$25 as the second prize. Other contests on big apples are for entries of plates of five apples, circumference to determine the awards. The first prize is \$25 with \$15 as second. The exhibitor of the largest single apple will receive \$20; the second largest, \$10.

Forty dollars to firsts and \$20 to seconds are offered for displays of one barrel or three boxes of any variety grown in the eastern, middle western, southern, and northwestern groups of states and districts or provinces outside of the United States.

A gold medal banner will be awarded to the manufacturer or distributor of the most practical and economical new appliance for use in planting, cultivating, picking, packing or marketing. The second prize is a silver medal banner.

Four hundred prizes of \$2 each to firsts are offered for plates of five apples.

Cups, gold and silver medals, and banners and trophies are offered for exhibits of factory and home made apple by-products, also for new varieties, and photographs and designs reproduced on apples.

The added premiums in the foregoing contests are nursery stock, orchard implements, spraying machinery and materials, and numerous other articles of value to orchardists. The contests in all classes are free and open to the world, no charge being made for the space occupied in the exhibition halls.

THE LEMON ASPECT OF THE TARIFF FIGHT

Without doubt the tariff fight at the special session of Congress was intensely bitter while it lasted, but now that the smoke has cleared away one is compelled to smile at the contest made by the Italian importers in New York for the removal of the duty on lemons. This was really the one humorous incident in the tariff campaign. Nothing funnier could be imagined unless Dr. Cook had appeared to ask that gum drops be put on the free list.

The growers in Italy and Sicily, be it understood, are protected by the government, which does not levy an import tax, it is true, because no lemons are imported into Italy; but it does give a substantial bounty to encourage the business, and the entire Italian nation, whether consuming lemons or not, helps to pay it. In this country we import half of the lemons we use, and we place an import tax on those coming from abroad. This has encouraged production in this country and has resulted in putting a curb on the rapacity of the importers, who formerly manipulated the market to their entire satisfaction. But listen to the plea of the importers, speaking in disguise from beneath the mantle of the "consumer," namely, the retailers and push-cart men dominated by the importers in Little Italy on the East Side of New York. They ask for free lemons in behalf of the sick! In fact, not one hospital in the country made a plea for free lemons. With lemons, under the force of home competition, selling lower than any other fruit in the market—lower even than potatoes—what an absurd plea. Rather was it not the boulevardiers, the bartenders, the idle loungers in the clubs, who really pleaded for free lemons to make their cocktails, their gin fizzes, their mineral water "lemon squashes," and the other concoctions of the mixologist? Why not be honest about it, and if these are the real sufferers from the fancied burden of the lemon tariff, why not help them out with a few free lemons direct from the lemon groves? But would one destroy a great and growing industry on the simple pleas put forth by the importing interests?

INTERNATIONAL PLANT BREEDERS MEET

One of the chief desires in the minds of many American plant breeders at present is to secure the sixth session of the International Congress of Plant Breeders in 1915 for California. To that end, prominent Californians in Paris at the time of the fourth conference in September were asked to use their influence at the meeting. There are probably a thousand plant breeders in America, and a large proportion of these carry on their work in California. Anyone desiring to obtain a printed report of the proceedings of the present session being held in Paris will do so upon sending \$3.00, the membership fee, to Secretary Philip L. de Vilmorin, 66 Rue Boissière, Paris.

C. W. Denton of C. W. Denton & Sons, Dansville, N. Y., called at the office of the NATIONAL NURSERYMAN.

THE ROTUNDIFOLIA GRAPES

F. C. Reimer, West Raleigh, North Carolina

The South is remarkably rich in native fruits. Native plums, persimmons, blackberries, dewberries, raspberries, huckleberries, mulberries, walnuts, hickories, and pecans are widely distributed, flourish, and many of these have given us valuable cultivated varieties. But the South is noted especially for its native grapes. Twenty of the species native to the United States are found in the South. Furthermore, all of the native species which have given us valuable varieties are well represented in the South.

Of all these fruits, the Muscadine grape, *Vitis rotundifolia* Michx. is the most unique. The latest authority on southern botany regards this grape as so distinct that he has placed it in a new genus, naming it *Muscadinia rotundifolia* (Michx) Small. It is distinctly a southern grape, growing wild from southern Maryland to Florida, and westward to central Texas. Even in the southern states, it is not found wild in the higher mountains, and when planted there proves a failure. It loves the sandy soils, hence is most abundant and reaches its highest development in the light soils of the Coastal Plain region. This grape is so abundant on the poor, sandy soils along the seashore from Virginia southward, that the early explorers, Amadas and Barlowe, gave a perfect description, when they exclaimed, "so full of grapes as the very beating and surges of the sea overflowed them," and further, "in all the world the like abundance is not to be found."

HISTORY

It must be emphatically stated that this species gave this country the first native grape to be brought into cultivation. Authentic records show that the Scuppernong grape was in cultivation in eastern North Carolina as early as 1760, and the indications are that it had been in cultivation for some time previous to that date. The original Scuppernong vine was found in Tyrrell County, in northeastern North Carolina, by Mr. Isaac Alexander, about 1750. The original vine, which is still bearing good crops, was photographed by the speaker in 1908.

CHARACTERISTICS

This species is so distinct from other grapes that it is easily recognized. The vine is a very rampant grower, and attains great size; single vines sometimes cover a quarter of an acre of ground. The speaker has measured one vine, the trunk of which is seven feet six inches in circumference. It attains a venerable old age, often passing the century mark. One of the striking features of this grape is the behavior of the trunk, which often splits up into several divisions when it becomes very old. The wood is hard, light gray in color, and the central portion, commonly spoken of as the pith, passes through the nodes, differing in this respect from all other species, except its close relative, *Vitis munsoniana*. The leaves are bright green, shiny, and comparatively small. The tendrils are simple, which distinguishes this species readily from all others save one. A marked peculiarity of old vines is the habit of producing numerous aerial

roots on the large branches, especially when the vine is grown on a dense arbor. These sometimes become long enough to reach to the ground where they will grow into the soil like ordinary roots.

The vines also present some marked correlations: The Scuppernong and other varieties producing light or white fruit, have greenish tendrils, nodes, and white-tipped aerial roots. The varieties with black or purple fruit have reddish tendrils, nodes, and aerial roots.

The flowers are produced in clusters, varying from ten to sixty in number. They contain stamens, but the pollen is worthless, at least in our cultivated varieties, hence they are self-sterile. The flowers, which are produced in great abundance, appear very late, during June in North Carolina. The blooming season of each variety lasts about four weeks. Considerably more than half of the wild vines produce only male flowers. Nurserymen should propagate and offer for sale male vines. At the present time only one nurseryman in the South is doing this.

The fruit is produced in small clusters, and with many varieties falls or "shatters" as soon as ripe. The berries are large, and are either black, purple, red, or white in color. The skin is generally very thick and tough. The pulp is tender, juicy, and very aromatic. In quality they rank from poor to excellent, depending on the variety.

Most of the varieties are very prolific. Some vines have produced at the rate of 870 bushels per acre.

The vines and fruit are comparatively free from diseases and insects. No insect injury of any consequence is done; the vine is seldom, and the fruit never, seriously injured by any disease.

CULTURE

The methods of growing this grape are somewhat unique. It is difficult to propagate from cuttings, and the laborious method of layering must be resorted to. This has retarded its distribution to a marked degree.

The vines are seldom pruned, and probably do better without pruning than any other grape in cultivation. The size of the berries is not materially reduced by lack of pruning, and the crop is usually abundant with such treatment. Many of those who have attempted pruning have given it up, stating that it does more harm than good. The principal reason for this is that the pruning has usually been done during the wrong time of the year. If these vines are pruned during late winter or early spring the result is such excessive bleeding that the plant is materially weakened, and it takes from two to three years for the vine to recuperate. If the vine is pruned during the summer, when in full leaf, or during the fall months, soon after the leaves fall, there is no bleeding, and no injury results. In this way, the vine can be kept within bounds, the clusters will be larger, and the fruit can be more easily gathered.

In most cases, the vines are still grown on the crude, old-fashioned arbors; and this beats any other mode of training,

so far as the shiftless grower is concerned. That some form of trellis will prove more satisfactory for the up-to-date grower is equally certain.

VARIETIES

At present only a comparatively small number of varieties of this species are in cultivation. The nurserymen are offering about a half dozen varieties, and only about a dozen more are locally grown. The varieties in cultivation, however, show that there are great possibilities stored up in this species. Of the varieties in cultivation, one has white fruit, one reddish fruit, while the others are either black or purple. Most of the varieties have round or spherical berries, but at least one variety has oblate fruit and at least two varieties have oval berries.

The ripening season of the early varieties begins during July, and the late varieties extend it to November. There is much variation in the color of the fruit, the thickness of the skin, and the quality. While most of the varieties shatter their berries readily when ripe, the fibro-vascular bundles of some enter the fruit as in the Concord, and the berries of these varieties cling tenaciously to the cluster.

Some of the very best varieties are only locally known, and some of them are not being propagated or sold by any nurserymen. This is unfortunate, as some very valuable varieties have been lost in this way. For example, Froelichs Seedling, at one time grown in eastern North Carolina, has been lost to cultivation, so far as is known at the present time. This variety had a sugar content of ninety-five per cent, according to Oeschle's scale. This is remarkable when we consider the fact that the Scuppernong, the leading variety now grown, tests only eighty per cent, when grown under the same conditions.

One of the interesting facts regarding this species is that all of the leading varieties, save one, have originated in eastern North Carolina. The Thomas, which is the only important variety that has originated outside of that state, comes from South Carolina near the North Carolina line.

USES

The fruit of this species can be put to as many uses as that of the Northern Fox grape. Nearly all of the varieties are excellent for dessert purposes; in fact, most Southerners prefer these rich, aromatic grapes to any others in cultivation. The only way to give most of the varieties a fair trial is to eat the fruit as soon as it is gathered from the vines. The skin is often broken where the stem is attached, and if the weather is warm, the juice soon begins to sour at this point. This precludes the possibility of ever shipping the fresh fruit of most of our varieties, to distant markets.

These grapes are admirably suited for wine-making. Among sweet wines made from native grapes there is none, superior to that made from the Scuppernong. A bushel of Scuppernong grapes will yield from three to four gallons of wine. While many prefer the wine made from the Scuppernong, some of the other varieties produce wines equally good, or better.

Unfermented grape juice has been made on a small scale from this grape by a few individuals for a good many years. Some of the varieties, notably the Scuppernong, are not very

satisfactory for this purpose, as the juice lacks character, or tastes "flat." Some varieties, like Flowers and James, will produce a fairly satisfactory grape juice, preferred by some to that made from the Concord grape. I hope that this may become an industry of some importance in the South, but so far the results have been very discouraging where it has been tried on a commercial scale.

IMPROVEMENT NEEDED

While the varieties of this species possess many very desirable characteristics, they also possess some extremely undesirable habits. It seems as though the best and the worst characteristics have been combined to produce this species. These undesirable features are: first, the dropping of the berries from the clusters as soon as fully ripe; second, the unevenness of ripening of berries in the same cluster, some of the berries often ripening and falling a week before the last on the same cluster are ripe; third, the small size of the clusters; and fourth, the very thick skin of some varieties.

As this is a very persistent and stable species, it will be a difficult matter to eliminate all of these undesirable characteristics. The matter is considerably complicated by the fact that they are self-sterile. In other words, it is impossible to cross directly any two varieties of this species.

By combining all of the desirable characteristics of several varieties, we can get near the ideal. We must get the clinging quality of the berries from the Flowers, the thick skin from the Thomas, larger clusters from the Flowers Improved, and uniform ripening of all the berries from another species.

It is possible that we may eventually get self-fertile varieties. Most of the wild Northern Fox grapes are self-sterile, and yet many valuable self-fertile varieties have been derived from that species. We have found in our work in North Carolina one wild fruiting Muscadine vine which produces good fertile pollen. It seems only reasonable to conclude that self-fertile varieties may eventually be found or produced.

A GRAPE FOR THE MILLION

In conclusion let me state that this is distinctly a grape for the amateur. It certainly is a grape for the millions. It is admirably suited to the careless, indifferent, happy-go-lucky grower.

Let us briefly summarize its desirable characteristics. It is easily grown, in fact, will flourish and yield abundantly for the lazy, the shiftless, and the undeserving. It will thrive on the very poorest soils. I have seen it yielding abundantly on the despised sand hills, where very few plants can subsist. It is long lived, each vine usually outliving the man who plants it. Its freedom from diseases and insects is proverbial. It is an enormous bearer, surpassing in this respect any other native grape. Each variety has a ripening season of practically one month, during which time good ripe fruit can be gathered every day. The ripening season of the various varieties, from the earliest to the latest, extends without a break from July to December. It furnishes delicious grapes after all the ordinary kinds are gone, and at a season of the year when there is a scarcity of fruits in the South. Surely, this is the king of fruits for the family vineyard of the South.

WHO ARE ENTITLED TO TRADE LISTS

Extract from Jim Parker's Speech at St. Louis

WHOLESALE NURSERYMEN

It is the province of the wholesale nurseryman to notice the trend of planting in the great fruit growing districts, to watch the public approval or disapproval of the different varieties and govern his plantings accordingly, to foster and encourage all movements for the beautifying of the cities, and to see that the supply of nursery stock is always up to the demand. In the wholesale nurseryman is centered that power and knowledge that gives stability and dignity to the business.

RETAIL NURSERYMEN

The retail nurseryman keeps in touch with local demands. He prepares those breezy advertisements which make the city man lonesome. He is constantly on the outlook for opportunities of increasing sales. If there is a large crop of apples in any community, he is ready to rush his salesmen in and push the sale of apple trees. If some farmer makes good money out of a peach crop, he is ready to offer that farmer's neighbors a chance to get rich growing peaches. If there is a glut in the wholesale market or a peculiar condition which causes the market to drop, thus offering him an opportunity for unusual profit, he is Johnny-on-the-spot and he knows just in which neck of the woods to go and sell trees.

TRAVELING SALESMEN

But the real worth of selling nursery stock on final analysis is found to depend upon the personal influence of the traveling salesman. Did you ever have one of those smiling Knights of the Grip come into the field where you were plowing? He did not put on any airs. He only quietly told you his name was Jones, and then added in a peculiarly friendly tone "John Jones." And the way he said John made you feel like you were not much interested in whether his name was Jones or Smith, John was the name by which he should be known to you. And you felt like if you had not met John before you ought to have met him. It was not necessary for John to make inquiry about your wife and children and your growing crops. There was that peculiar feeling of good fellowship in his voice and manner which made you know that he was interested in you and yours. In his cheerful presence your griefs were soon forgotten and your blues stole softly away. Then do you remember how you and John sat down on the plow handles and looked at the pictures in his book. He did not presume to advise or argue with you, but somehow his peculiarly interested and suggestive way of asking about your plans started you to thinking and planning, and as your plans developed in your own mind, you were glad to have your friend John by your side to help you work out the details and get things right. Trade with John, of course you do! He is the sort of a man you like to do business with.

I once walked up to the counter of a busy merchant and remarked "Have you not for the last five years been planning to plant that field in front of your house to apple trees?" He answered, "Yes, but I cannot plant the orchard this year and I am too busy to talk to you." I laid my watch on the counter and asked him to give me two minutes. He consented. I asked him what would be his estimate on the yield of an apple tree at the ages of five, six, seven, eight, nine and ten years? He replied one-half bushel at five, one at six, one and a half at seven, two at eight, two and a half at nine and three bushels at ten. I called his attention to the fact that the one-half bushel gradual increase of yield each year represented the amount of fruit that he would gain within ten years as a result of planting this year instead of delaying a year longer, that it amounted to three bushels per tree or six thousand bushels for two thousand trees he was intending to plant. Then I asked him what was the difference in expense between planting this year and next? He replied, only the interest on the cost of trees and labor which would amount to about \$30. I then said, "When I come back here at one o'clock tomorrow, I want you to tell me wherein your own figures are incorrect or give me a reason satisfactory to yourself why you are not willing to swap that \$30 for 6,000 bushels of fruit?" On the stroke of one I again approached my merchant and from the smile on his face, I knew I had won. I merely asked him what varieties he wished to plant. He replied, "You know best what sorts are profitable, I will leave the selection to you." In less than one minute the deal was closed. When those trees were delivered, my merchant said to me, "Had you called on me five years sooner, I would now have had an orchard worth \$5,000.00 instead of just beginning to plant." The man who stirs people up and gets them to plant orchards and improve their homes is doing a real service for his fellowmen. And, gentlemen, in spite of the abuses of the system, three-fourths of the orchards of the country have been and will continue to be planted because of the hope and energy inspired in the minds of men by the genius and good sense of the traveling salesman. It is to the interest of the nursery trade to give him a chance to do his best.

In saying we should give salesmen a chance to do their best, I do not mean that we should make cheap prices. The question of opportunity and honesty is not necessarily dependent on whether prices are high or low. I mean we should give the salesmen a square deal; that our catalogues and instructions to salesmen should tell the truth. That no difference whether we sell an apple tree for one dollar or for ten cents that apple tree should be as good a tree as we promise and bear the fruit we say it will. Uniform prices to the retail trade are not practicable. There are communities where sales are light and consequently higher prices must be charged. There is the City Trade which demands the largest and best trees. The actual cost of the trees may not be more than two cents above the cost of grades sold in thousand lots to farmers, but the cost of selling one to a dozen trees to a customer and handling the business as the City Trade demands may make it necessary to charge fifty cents per tree more in the city than in the country.

EUROPEAN CONDITIONS

Excessive Heat and Drought Produce Short Crops

EDITOR NATIONAL NURSERYMAN:

Sir:—The Andre Leroy Nurseries, which I represent in this country, have repeatedly complained of injury done to their plantations by severe heat and protracted drought; and several weeks ago they requested me to stop selling large sized stocks, 6-10 and 7-12 mm, as, while they foresee a good crop of fruit seedlings, they expect that the large sizes will be scarce, heat having stopped the development of the plants. Such heat as was experienced in France during July and August had not been known there for over 100 years.

ANDRE L. CAUSSE.

EDITOR NATIONAL NURSERYMAN:

SIR:—The disturbing rumors in circulation regarding the shortage of European nursery stock are rather exaggerated. The quantity is there, but the quality is lacking, as the season they are just passing through is the worst ever known in the section of France where nursery stock and fruit tree seedlings are grown. They have not had a drop of rain since June 30th, and are having the hottest kind of an American summer. For six weeks the thermometer has been above 90°, and for a few days 95° to 102° Fahrenheit. This, of course, has had a serious effect upon young nursery stocks, much of which is likely to be light, poorly rooted, and low grade, unless we should have, from now on to digging time, the most favorable weather.

GEO. E. DICKINSON.

EDITOR NATIONAL NURSERYMAN:

SIR:—The hot summer weather and long continued drought in Europe is having a disastrous effect upon growing crops. In England and many parts of France and Germany, there have been no effective rains for over three months, and in places where stock could not be artificially watered, the growing crops are shrivelling up. The following items are hard hit.

Manetti. These come principally from England and France. In both countries there will be less than half a crop. The grade of those shipped will necessarily be inferior. Practically all of the available crop was bought up before June. It is doubtful if American buyers will get more than 60% of their requirements, then only where they ordered before June.

In Germany the season was the hottest and driest they have had for 73 years. The effect upon the crop of lily of the valley pips is problematical, though it is almost sure that the product will be inferior to former seasons. As a precaution, most firms are refusing to book further orders except at a considerable increase in price.

France is particularly hard hit. They grow for export millions of young fruit and ornamental stocks. Even artificial watering is ineffective, as the wells are dry. Prices rule much higher than usual and there will be many shortages on orders.

Belgium has not suffered so much, as their export stock is all artificially watered, but the exceptionally hot summer weather shows its effects in the azaleas there. They will be smaller and more stunted in growth than usual. Crop is up to normal, though the varieties Mad. Vander Cruyssen, Mad. Petrick, Simon Mardner and Vervaencana remain scarce, and most growers are limiting orders to percentages of these varieties.

McHUTCHISON & Co.

EDITOR NATIONAL NURSERYMAN:

England seems to have suffered more than any other country as regards unfavorable conditions for the production of nursery stock, and again most severely in the southern districts; still our growers, W. Fromow & Sons of Windlesham, Surrey, report their stand of low budded roses to be a good one, but the manetti are not expected to give more than a half normal crop.

Holland seems to have suffered but very little.

Germany has suffered mainly in the seed growing districts; likewise in the lily of the valley districts; what will result in the latter can not yet be correctly estimated, except that the size of the growing pips will be much behind normal years.

Belgium has suffered through lack of water in the azalea districts in and near Ghent. The plants will average smaller in the crowns. Otherwise we have no bad reports.

France reports that manetti, cherry, and plum seedlings will be a very short crop caused by the prolonged heat and drought. Our people, Levavasseur & Sons, write us from Ussy under date of the 9th Sept.: "About Crops the only thing we can say is, that we have not had any rain for the last two months in France, and in consequence, many hundreds of thousands of young seedlings are lost. However, we are better off in our irrigated nursery than many others. Every week we have French nurserymen coming to look for stocks. But we shall wait till October before beginning to sell. Of course we reserve our American articles; and we hope to have yet quite a line to offer in fruit tree stocks and ornamentals. The thermometer is still keeping at and near 100 Degrees Fahrenheit."

Individually we hope that the final outcome will not be quite so poor as many are anticipating at present.

AUGUST ROLKER & SONS.

The Central Nursery & Floral Co., of Kalamazoo, Mich., has retired from business.

NATIONAL NURSERYMAN:

We enclose herewith check for \$1.00, one year's subscription to the NATIONAL NURSERYMAN. We derive a world of information out of it and could not get along very well without it. With best wishes we beg to remain, yours very truly,

Texas.

SOUTHWESTERN NURSERY CO.,

Correspondence

EDITOR NATIONAL NURSERYMAN:

Sir: From information just received from our houses abroad, we are not very optimistic about the adequacy of the supply of European nursery stocks, especially seedlings and the smaller sizes of deciduous and coniferous stocks.

The stocks grown from cuttings, etc., and planted out had severe droughts to contend with right after planting, a condition which prevailed practically the entire season, and which has left large blanks in many a nursery row.

To quote from one of our correspondents under date of August 20th:

"We are experiencing here a summer of unknown drought and heat, the thermometer hovering about the 90 Fahrenheit mark.

This is something altogether new to our country (Holland) and where situated on high land, most stocks perish, making many a nursery a sad sight in general.

In Germany, it is still worse, I am informed by nurserymen who have traversed that country and the same conditions prevail in France."

This seems to be borne out by the fact that seedling stocks have been rising in price the last four weeks, since it has been possible to get at a fair estimate of the stock that would get to a salable size. The number one sizes of fruit stocks especially are at present practically all sold out.

There are of course some favorite spots where stocks have done very well considering everything, but these are few and far between. Is this one of nature's methods of preventing overproduction, a condition that sometimes seems to confront our trade?

THE HORTICULTURAL CO.

EDITOR NATIONAL NURSERYMAN:

Sir: Trees which are established in the ground have the roots sufficiently protected so that they can get the moisture from deep in the ground and especially in Holland, where the subsoil is always wet trees do not suffer from drought. Transplanted trees have suffered very much all over Europe, but trees which are transplanted in the spring are not sent out in the same season. Rhododendrons are badly burned, that is, the top leaves from some of the varieties are scorched and will be brown, and we are waiting for rain to find out in how far they have suffered. I do not consider this much of a loss, as the plants are healthy, and will grow in price, if kept a year longer. but it may give a shortage in some sizes, and in most of the tender sorts which are used for forcing. Conifers are growing nicely now. Pot grown stock, that is shrubs, as Lilac, Prunus Triloba, Malus in sorts, etc., which are taken up in August and planted in pots to be used for forcing, will not be very good this year. The greatest loss will be on the small transplanted stock in the nurseries, and also on the one year old seedlings. The top soil being dry, the seeds did not sprout well, and even when they did, the young plants did not grow much, so that there will be a shortage on French seedlings.

P. OUWERKERK.

ENFORCEMENT OF INSECTICIDE ACT OF 1910

The Secretary of Agriculture has organized, to assist him in enforcing the Insecticide Act of 1910, the Insecticide and Fungicide Board, composed of four members of the scientific staffs of some of the bureaus of the Department. Sections 1 and 2 of this act refer to persons trading in insecticides and fungicides between the United States and her insular possessions or Alaska, making it punishable by fine or imprisonment to manufacture or sell an adulterated or misbranded insecticide or fungicide in the above-mentioned territories. It is the duty of the department of Agriculture, according to Section 4, to examine specimens of insecticides, Paris greens, lead arsenates, and fungicides, to discover whether any such are adulterated or misbranded. Further information may be obtained from the Insecticide and Fungicide Board, Dept. of Agriculture, Washington, D. C.

FARM DRAINAGE

It is coming to be recognized that a fundamental requirement of permanent orcharding or satisfactory tree-growing is the fitting of the ground by laying tile drains to remove surplus water and regulate the moisture-holding capacity of the soil. The department of soils in the various colleges of agriculture are paying a good deal of attention to this. One of the most suggestive bulletins which has come to our desk is "Farm Drainage Operations" by W. H. Day of the Ontario Agricultural College. This discusses the whole question of underdrainage from the standpoint of the surveyor and leveler, and the installation of the tile and completion of its outlet. Undoubtedly copies of this bulletin can be obtained by applying to the Agricultural College of Guelph.

BOOM IN THE FLORIDA EVERGLADES

The reclamation project which has been under consideration for so many years in reference to the draining of the everglades has been finally got under way to the extent that a considerable area of this partially submerged portion of Southern Florida is now redeemed and waiting the efforts of the cultivator. Considerable areas in the vicinity of Miami are said to be suitable for the growing of sugar, bananas, and pine apples. A mild boom is in process and big things are expected in the way of land deals in the near future. This land is supposed to be in the small frostless zone of Florida.

Personal Mention

Geo. S. Josselyn, of Fredonia, N. Y. and wife attended the wedding of the daughter of Charles Brown of Brown Bros. Nurseries, Rochester, N. Y., the third week of September.

John Fraser, Jr., of Huntsville, Ala., during the month of September, called at the office of the NATIONAL NURSERYMAN, and other nurserymen in Rochester and western New York.

"We simply could not do without the NATIONAL NURSERYMAN.
Missouri. H. J. WEBER & SONS.

TEXAS OFFICERS

At its meeting in Waco, Sept. 12-13, the Texas Nurserymen's Association elected the following officers; J. R. Mayhew, president, Waxahachie; J. R. Downing, Wichita Falls, vice-president; J. S. Kerr, Sherman, secretary and treasurer.

Catalogues Received

Avenue Nurseries, W. B. Cole, Painesville, Ohio. Price list to the trade.

W. E. Caldwell Co., Louisville, Ky. Catalogue of Steel and Wood tanks and towers.

D. H. Henry, Geneva, N. Y. Surplus list.

Gray's Nursery, Pekin, Ind. Wholesale catalogue and price list.

Vincent Lebreton's Nurseries, LaPyramide Trekaze, France. Wholesale trade list of nursery stock.

Ellwanger & Barry, Rochester, N. Y. Wholesale price list.

Leesley Brothers, Nurseries, Peterson & N. 40th Avenues, Chicago, Ills. Wholesale Catalogue.

T. S. Hubbard Co., Fredonia, N. Y. Wholesale price list of Grape Vines, and small fruits.

Geo. S. Josselyn, Fredonia, N. Y. Wholesale catalogue of American Grape Vines and small fruits.

H. Den Ouden & Sons, Boskoop, Holland. Fall 1911 Price List. Prices are quoted in American Currency.

The Park Nurseries, Holm & Olson, St. Paul, Minn. Illustrated catalogue of hardy ornamental trees, shrubs, roses, plants, and fruits. Also "Landscape Development."

The Leedle Floral Co., Springfield, Ohio. Price list of roses, fall and winter, 1911-1912.

Fraser Nursery Co., Huntsville, Ala. Wholesale price list, fall, 1911.

Wilfrid Wheeler, Concord, Mass. Midsummer and fall list of pot-grown strawberry plants.

E. Turbat & Co., 67 Route d'Olivet, Orleans, France. Preliminary wholesale list of roses, August, 1911.

L. E. Williams, Exeter, N. H. Seed list of native trees, shrubs and plants.

Woodlawn Nurseries, Rochester, N. Y. Fall price list of fruit trees.

W. N. Scarff, New Carlisle, Ohio. Semi-annual Surplus list of Choice New and Standard Bush Fruits.

The Northeastern Forestry Co., New Haven, Conn. Fall catalogue of high grade tree seeds and nursery stock.

P. D. Berry, Dayton, Ohio. Wholesale price list of small fruit plants for fall 1911.

Vincennes Nurseries, W. C. Reed, prop., Vincennes, Ind. Semi-annual wholesale trade list.

Pan Handle Nurseries, J. K. Henby & Sons, Greenfield, Ind. Wholesale Catalogue for Fall 1911.

Chase Nursery Co., Huntsville, Ala. Wholesale price list for Fall.

Richland Nurseries, Rochester, N. Y. Catalogue of reliable Fruit and Ornamental Trees, Bulbs and Peonies.

Willowdale Nurseries, Kennet Square, Penn. Wholesale trade list for Fall 1911.

Conard & Jones, West Chester, Penn. New Floral Guide for Autumn 1911.

Morris Nursery Co., West Chester, Penn. Trade List for Fall 1911.

Willis Nurseries, Ottawa, Kans. Trade list of Nursery Stock for Fall 1911.

CHOICE ASPARAGUS PLANTS

For Fall or Spring Delivery.

Plants Grown on Contract. Can Use Other Stock in Exchange.

PERRY NURSERY CO., - - PERRY, IA.

Sample for asking.

WANTED

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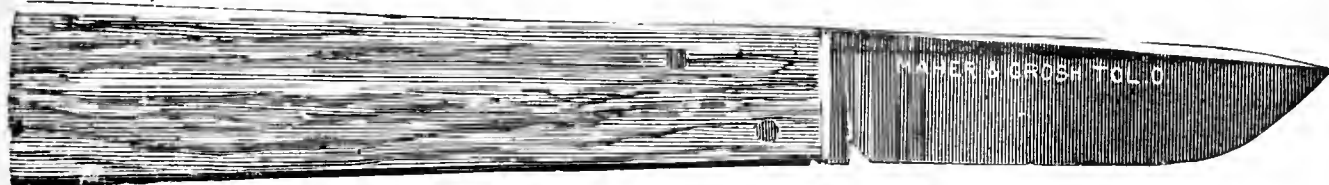
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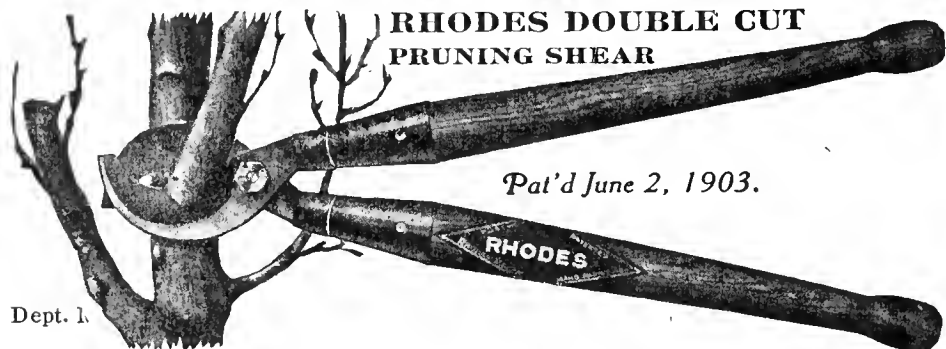
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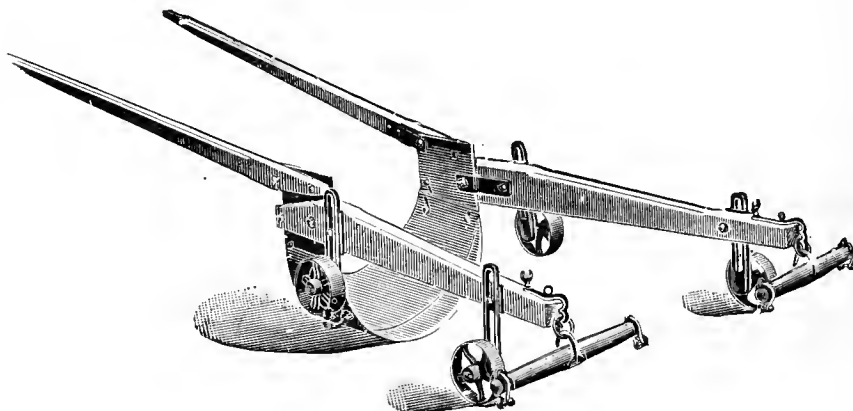
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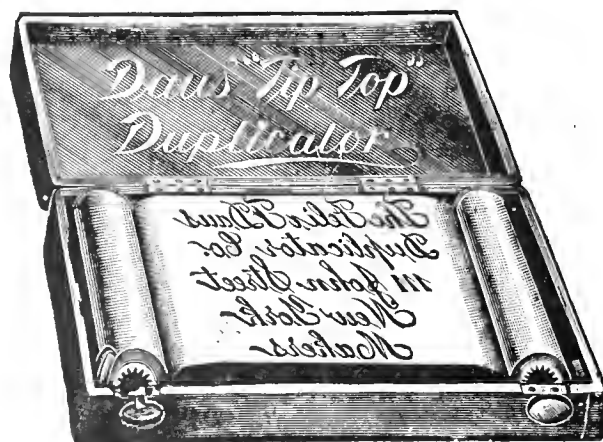
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Our stock is well grown and graded. Prices are such that it will pay to
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PEACH TREES

IN COMMERCIAL VARIETIES

NORWAY MAPLE,
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CALIFORNIA PRIVET,
2-year

The Greenbrier Nursery Co., Inc.
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is the name of the men who grow the finest

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that can be produced by suitable soil, climate and expert knowledge.

Take a look at the stock or ask for a sample and be convinced of the extra quality of their

TREES

CHERRY—3-yr., 2 inch up, 7 to 9 feet, for high-class retail trade

APPLE—1 year and 2 year.

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Seedling and Transplanted Evergreens by the million

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White Spruce

We have these in all sizes and ages. Also a general line of nursery stock.

Evergreen price list now ready.

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EXTENSIVE STOCK OF CONIFERS, including a quantity of well-shaped specimens for decorative purposes. Low prices can be quoted on all Conifers. **HARDY ORNAMENTAL EVERGREEN AND DECIDUOUS TREES. ROSES**, Standards, Dwarfs and others. **MANETTI** and other **ROSE STOCKS. FRUIT TREES** in large quantities. Transplanted **FRUIT TREE STOCKS. RHODODENDRONS** and other **AMERICAN PLANTS**. (A good stock of all hardy varieties of Rhododendrons). **CLEMATIS** and other **HARDY CLIMBING PLANTS**. Transplanted **FOREST TREES**. The stock is in excellent condition this season. **FIRST GRADE STOCK ONLY SUPPLIED.** 30 years' successful trading in the States. No Agents. Write direct for wholesale catalogue.

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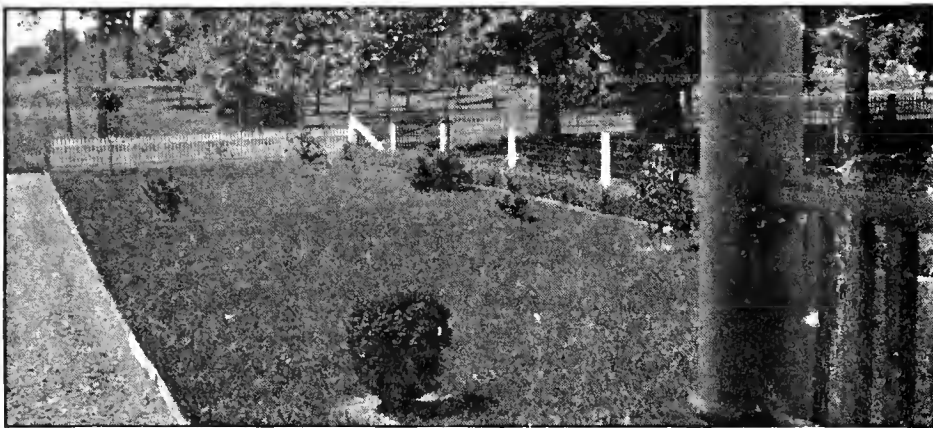
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Sell Your Customers the Kind of Stock that Invites "Repeat" Orders!



Handsome plantings made with Harrison Stock. Such orders are well worth going after, and when you sell such stock as these pictures show, you gain a customer well worth keeping.

For nearly 25 years our constant aim has been to grow and sell just that kind of stock—we always figure not alone on the immediate profits, but *on giving satisfaction*—so the customer will come back again and again whenever he wants more trees. The growth of our business has proved the soundness of the idea, and the fall of 1912 finds us more firmly convinced than ever that it is the only good way.

You can build up that kind of a trade; the stock listed below will help you do it. You know the kind of trees we grow here, and you know something about *how* we grow them; this month we show a few home grounds, planted with stock grown and supplied by us.

The owners are more than satisfied with what we gave them; their "repeat" orders, and those of thousands of others over the country, make it "good business" to *think of the kind of results our stock will produce*, instead of considering only the profits we could get from a single order. There's plenty of that kind of trade for all of us, if we go after it *right*.

Norway Maples, Koster's Blue and Norway Spruce, are only a few of our leading ornamentals; among our fruits are one and two-year Apple, Kieffer Pear, etc. They are all listed in our current bulletin with prices to the wholesale trade. If you are not receiving this regularly drop us a line and we will put you on our mailing list. Inquiries answered promptly.

Our Specials: Norway Maple, Norway Spruce, Koster's Blue Spruce, 1 and 2-yr. Apple, Kieffer Pear

PEACH TREES

3,333,333 Budded a Year Ago at Harrison's Nurseries

All these trees are of varieties that we carefully test in trial and fruiting orchards; we therefore know them to be of first quality and strictly reliable. We have over 100 varieties, 1-year buds as follows:

1 inch up, 7 to 8 feet.
 $\frac{3}{4}$ to 1 inch, 6 to 7 feet.
 $\frac{1}{8}$ to $\frac{3}{4}$ inch, 5 to 6 feet.
 $\frac{1}{2}$ to $\frac{1}{8}$, 4 to 5 feet.
 $\frac{3}{8}$ to $\frac{1}{2}$ inch, 3 to 4 feet.
 2 to 3 feet.

APPLE TREES

Apple trees that *succeed*—that are profitable to plant in home or commercial orchards—are our kind, and since you're interested in that sort, too, we'd like to talk it over with you.

We will have three million one-year budded apple trees—5 to 6 ft.

McIntosh	Red Astrachan
Baldwin	Early Harvest
Grimes'	Yellow Transparent
Stayman's	Rome Beauty
Stark	Winesap
Ben Davis	York Imperial
Gano	

and other leading kinds.

900,000 one-year grafts.	
100,000 two-year buds and grafts of	
Baldwin	Yellow Transparent
Rome Beauty	Red Astrachan
Winesap	Early Harvest
York Imperial	Ben Davis
N. W. Greening	Gano
Transcendent Crab	Duchess
Stark	

and others—all well grown. Will have some one inch and up, extra grade trees.

PEAR, CHERRY, GRAPE, ETC.

Such fruits as pear, cherry, plum, grape, berries, vegetable roots, etc., are strong lines with us. We maintain trial and fruiting orchards, giving new varieties careful tests.

We will offer ten million Strawberry Plants next spring. Give us a call.

PEAR TREES

Kieffer

50,000 Kieffer Pear, 2 year $\frac{1}{2}$, $\frac{5}{8}$, $\frac{3}{4}$ and 1 inch
 50,000 Kieffer Pear, 1 year, 4 to 5 ft., 5 to 6 ft.
 All on French roots—no finer grown.

Bartlett

10,000 Bartlett, 3 year $\frac{3}{4}$ and up and 1 inch up.
 No finer grown.
 5,000 Bartlett, 2 year, $\frac{5}{8}$ to $\frac{3}{4}$; also Garber and Clapp's Favorite.

CHERRY TREES

30,000 2 yr. and 3 yr. Sweet and Sour Cherry; leading varieties, $\frac{3}{8}$ and $\frac{1}{2}$ in.
 20,000 1 yr. Sweet and Sour Cherry.

QUINCE

2,000 Quince, 1 year.

GRAPE VINES

10,000 Concord, 2 year, transplanted
 10,000 Concord, 1 year, fine
 10,000 Moore's Early, 2 year transplanted

Our grapes are in fine shape; the vines will please you.

ASPARAGUS ROOTS

100,000 2 year strong Asparagus roots
 200,000 1 year, leading varieties: Palmetto, Barr's, Conover's, Giant.

ORNAMENTALS

MAPLE TREES

You'll not find a finer lot of maples than we grow in our Nurseries at Berlin; our rich, loose soil encourages root formation, and each tree has plenty of room to grow. Your trade will be pleased with these trees.

NORWAY MAPLES

100 Norway Maples, 3 inches, 12 feet
 1,000 Norway Maples, 2 inches, 10 to 12 feet
 12,000 Norway Maples, 1 $\frac{1}{2}$ inches, 10 ft.
 13,000 Norway Maples, 1 $\frac{1}{4}$ inches, 9 to 10 feet
 15,000 Norway Maples, 1 inch, 8 to 9 ft.
 110,000 Norway Maples, $\frac{3}{4}$ inch, 7 to 8 feet
 Straight, smooth—no finer grown.

SUGAR MAPLES

1,000 1 $\frac{1}{2}$ inch, 10 feet
 1,000 1 $\frac{1}{4}$ inch, 8 to 10 feet

SILVER MAPLES

1,000 Silver Maples, 3 inches 12 feet
 1,000 Silver Maples, 2 inches, 10 to 12 feet
 2,000 Silver Maples, 1 $\frac{3}{4}$ inches, 9 to 10 feet
 3,000 Silver Maples, 1 $\frac{1}{2}$ inches, 9 to 10 feet
 4,000 Silver Maples, 1 $\frac{1}{4}$ inches, 9 to 10 feet
 5,000 Silver Maples, 1 inch, 8 to 9 feet
 10,000 Silver Maples, $\frac{3}{4}$ inch, 7 to 8 feet

MISCELLANEOUS

1,000 Russian Mulberry, 8 to 10 feet
 1,000 Catalpas, 8 to 12 feet
 1,000 Box Elder, 2 inches
 1,000 American Black Ash, 1 $\frac{1}{4}$ inches
 1,000 Carolina Poplars, 1 $\frac{1}{4}$ inches
 1,000 American Linden, 1 inch
 1,000 American Elm, 1 inch

BERBERIS THUNBERGII

50,000 2 year, 12 to 18 inches
 5,000 3 year, 18 inches
 1,000 4 year, 2 to 3 feet

Harrison's Nurseries
 J. G. HARRISON & SONS PROPRIETORS
 BERLIN MARYLAND

Designed and written by The McFarland Publicity Service, Harrisburg, Pa

W. F. HUMPHREY, PRINTER, GENEVA, N. Y.



THE NATIONAL NURSERYMAN



NOVEMBER, 1911

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

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Established 1847.

OFFER A GENERAL LINE OF

Choice Nursery Stock

CHERRY and STD. PEAR

of Extra Fine Quality.

If you are in the market for superior trees write
us for prices.

I. E. Ilgenfritz' Sons Co.
MONROE, MICH.

EVERGREENS

OUR LEADING SPECIALTY

RHODODENDRONS, HEMLOCKS, WHITE
PINES, BOX BUSH. A general collection
of specimen ornamentals.

ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI
by the thousand.

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Mount Arbor Nurseries

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Make a Specialty of a Full Line of
General Nursery Stock for the
Wholesale Trade

Large Stock of

FRUIT TREES

SMALL FRUITS

APPLE SEEDLINGS

FOREST TREE SEEDLINGS

CALIFORNIA PRIVET

ROSES AND ORNAMENTALS

APPLE GRAFTS made to order

ALWAYS PLEASED TO QUOTE PRICES

1,000,000 POPLAR

Norway, Canadian and Carolina

We offer this year the largest stock of northern-grown
Poplar, L. L. Willow, Box Elder, Soft Maple and other
hardy shelter belt stock to be found in the country.

Write us for prices on carload lots.

The Jewell Nursery Co.

LAKE CITY, MINNESOTA

Established 1868

1500 Acres

RELIABILITY

THE THREE legs of a stool are interdependent. That is, they depend one upon the other. If one leg withdraws its support, the others lose their balance. The Nursery Stock stool has three legs to stand on, called "reliability," "quality," and "price."

Now to place import orders with an unreliable firm at any price is apt to bring its harvest of trouble, and to buy the stock from any firm because it's cheap, regardless of quality and source of supply is foolishness, for how in the name of the Board of Health can you make a profit on unreliable stock. Better import through a reliable house, pay the price, and dodge bargain-counter, selling-below-cost offers.

There are always firms looking for those whose middle name is "Succor." They are the legitimate prey of shysters. A recent foreign quotation reached us through one of our customers reading like this:

"Holland Apple Seedlings 3/5 m/m @ \$1.98 per 1,000 F.O.B. New York. Duty paid. Packing free."

Now on such offers the "succors" bite. Those who know, see the worthlessness of it immediately, because the U. S. duty alone is \$2.00 per 1000. It is like buying a dime and pin (diamond pin) for a dollar.

Even though you do not buy from us, for the good of yourself and the Nursery business as a whole, don't take chances upon import orders. Import only through reliable American firms—good, substantial import houses—men who are morally and financially responsible. That's business on the twentieth Century plan.

Mark Twain said "It's funny all large rivers run through large towns" and it almost makes us think we are a large town, because our customer list is made up of almost all the large and responsible buyers, not to mention the small tributaries which may make large rivers in time. It costs us lots of money to keep posted upon crop conditions and prices from day to day by cable, not mentioning annual European visits to our firms, but our business shows an increase of \$103,000 during the last two years—we are busy men—and remember when you want anything done and done well, call on a busy man—for the other kind have no time. We have time for business—that's why we are busy men.

We can still book import orders for Apple stocks, also full line of Ornamental stocks from France. Norway and Schwedler Maples, Lindens, Chestnuts, etc. from Oudenbosch, Holland. Roses, Boxwood, Koster Blue Spruce, Rhododendrons, etc. from Boskoop, Holland. Bay Trees from Belgium. Nursery stock from England, Japan, etc., etc. Everything in the Nursery import line and RED STAR RAFFIA.

Send for prices and particulars, stating what you require, for we issue 18 different catalogues, special lists, duty cards, booklets, etc. Always glad to give information.

McHUTCHISON & CO.

THE IMPORT HOUSE

17 Murray Street

NEW YORK

Franklin Davis Nursery Co.

BALTIMORE, MD.

We offer for

FALL 1911 and SPRING 1912

APPLE—1 and 2 year; heavy on York Imperial, Stayman's Winesap, Grimes Golden, Rome Beauty, and other standard varieties in 1 year old.

PEACH—General assortment.

CHERRY—1, 2 and 3 year; some heavy trees.

PEAR—STANDARD, Kieffer, 1 year.

ASPARAGUS—1 and 2 year.

CALIFORNIA PRIVET—1, 2 and 3 year, in carload lots—fine.

ORIENTAL PLANES.

CAROLINA POPLARS.

NORWAY and SILVER MAPLES.

RHUBARB—1 and 2 year.

We also have a general line of other stock. Send us your WANT LIST. We need your orders.

We want PEACH SEED (NATURALS)

Buy Early for Fall Orders

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Will have the most complete stock of trees and plants to offer from their

FLORIDA AND TEXAS NURSERIES

For delivery season 1911-12 ever offered in the South

We Can Probably Supply Your Wants

Budded Pecans, Japanese Persimmons, Figs, Muscadine Grapes, Satsuma and other Hardy Oranges, Grape Fruit and Kumquats, Mulberries, Non-sprouting Grafted Roses, Crape Myrtle, Biota Aurea Nana and other Conifers, Eucalyptus and Camphor Trees are a few of our leaders.

A complete assortment of Fruit, Nut, Ornamental Trees and Shrubbery.

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United States at the

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Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
Plants, Grapes, Gooseberries, Small Fruits, Bulbs, Seeds, Palms
and other tender Greenhouse Plants

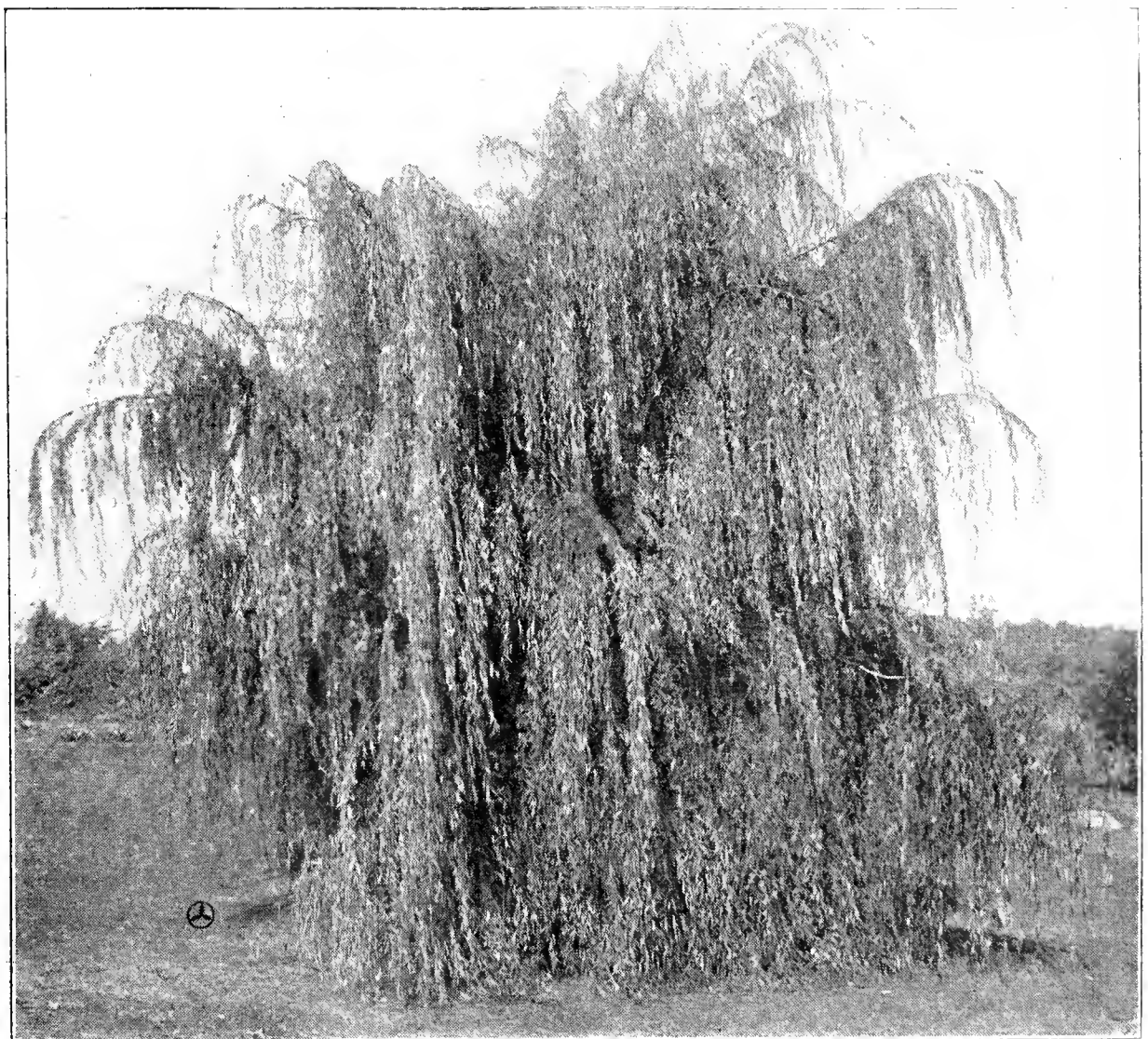
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switch from N. Y. C. lines direct into our packing house; can load without exposure.
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STANDARD PEARS in assortment DUCHESSE DWARF PEARS BOURGEAT QUINCE
PRUNUS PISSARDI and TRILOBA CUTHBERT AND OTHER RASPBERRIES
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Our Specialties are:

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Ramblers
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Peaches, Pears, Plums
Cherries
Ornamental Trees
and Shrubs in car lots
Weeping Mulberries
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Bush and Tree
Perennial Plants



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SPLENDID TREES

Sizes one to two inches caliper

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offer to the trade an unusually complete assortment of Fruit and Ornamental Stock, including some things scarce and hard-to-find; their Tree Hydrangeas, Tree Lilacs, Roses, Clematis, Ampelopsis Veitchii, Dwarf Apples, Cherries on Mazzard, and a few other Specialties, have earned for the J & P goods the name of

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A few more buyers can be taken care of very well. Want Lists are invited. Price List will be sent on request. The address is

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Dispensers of The Preferred Stock, grown at NEWARK, which is in WAYNE COUNTY, near Rochester, New York

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PEACH PLUM

A Fine Block of
Own Root Roses

ORNAMENTAL TREES SHRUBS

BERRIES CLEMATIS

EVERGREENS PEONIES PHLOX

PYRAMIDAL and STANDARD

TREE BOX, 3 to 6 feet

Write for our Special Prices

Special Attention given to Dealers, complete lists and carload lots.

W. & T. SMITH COMPANY

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63 Years

700 Acres

Magnolia

Grandiflora

Nothing can compare among broad-leaved evergreens with the beauty of foliage and flowers of our Southern Magnolia. Magnificent, large white flowers from the middle of April until August. Hardy at Philadelphia. 25,000 pot and field grown plants, all with finely branched roots, no better stock in America. Write for prices.



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It pays you to have stock of such high quality as Berckman's Southern-grown trees and plants. We ship all over America and to many foreign points. Northern nursery stock cannot approach the splendid vigorous growth—the demands of our customers prove this.

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We have the largest and most varied collection of Conifers in the South. A fine assortment of large specimens for immediate display. Write for prices on any of the above stock. Get our trade list and descriptive catalogue telling about our full line of Ornamentals, Fruits and Nuts. Your trade will appreciate the quality of Berckmans' stock. Real trade builders.

P. J. BERCKMANS CO., Inc., Fruitland Nurseries
Established 1856
Over 450 Acres in Nurseries
Augusta, Georgia

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By BENJAMIN MINGE DUGGAR

Professor of Plant Physiology in Cornell University

This book is designed to serve as a substantial reference book and is the result of special experience in the study of the practical aspects of plant pathology. There is a comprehensive discussion of the chief fungous diseases of cultivated and familiar plants.

Each disease is discussed with reference to its occurrence, the nature of the lesions or processes induced, the structure, life history, and cultural relations of the casual fungus, and practical methods for prevention or control.

The literature of the subject is freely cited, and a host index provides a ready reference to all of the important fungous diseases occurring upon any host. The method of treatment followed is intended to facilitate and stimulate the work of the nurseryman and practical fruit grower and to enlarge the interests of the general reader. The book is very fully illustrated from photographs and from drawings especially made for this work.

8 vo. 508 pages, Illustrated.

\$2.40. Trade Edition.

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The Best Tree Digger on Earth



Used and Recommended by Leading
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The one we have used for years and by far the most satisfactory of any we have ever seen. It does exactly the work for which it was designed and does it right. If interested we will be glad to send description and prices.

Stark Bros. Nursery & Orchards Co.

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APPLE—1, 2 and 3 year in leading sorts.

CHERRY—1 and 2 year fine stock.

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PLUM—1 and 2 year Japan, European and native sorts.

PEACH—1 year leading sorts.

PRIVET—1 and 2 year fine stock.

SHADE TREES in car load lots Norway Maple, American Elm, Box Elder, Silver Maple, etc.

We also have a general line of other stock not mentioned above.

WANT LISTS INVITED.

We Offer the Wholesale Trade for Early Fall Delivery

CHERRY, 1 inch up, $\frac{3}{4}$ to 1 inch, $\frac{5}{8}$ to $\frac{3}{4}$ inch, and all under grades. Our surplus of 75,000 Cherry are first class in every particular.

APPLE, $\frac{5}{8}$ to $\frac{3}{4}$ inch, and all under grades. 100,000 surplus Apple that are making up good.

PEACH, PLUM, APRICOT, ALMOND, one year, mostly heavy grades.

PEAR, all grades, large surplus.

ONE HUNDRED THOUSAND 2-year, heavy California Privet. Special quotations in 50,000 lots. If in the market let us quote you.

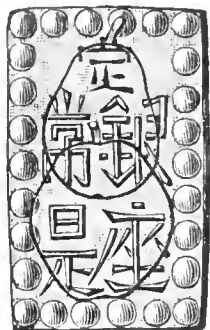
Want 200 bushel of Peach Seed.

WAXAHACHIE NURSERY CO.

J. R. MAYHEW, President

WAXAHACHIE, TEXAS

Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries

Huntsville, Ala.
JESSIE S. MOSS, Prop.

We offer for Fall of 1911 and Spring of 1912 in large quantities as usual:

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APPLES—Commercial varieties, one year, in large supply. As fine in quality as ever grown.

PEARS—Kieffers, one and two years old. A much smaller crop than heretofore.

CHERRIES—On Mazzard. One year. Bing, Lambert, Napoleon, Black Tartarian.

CHERRIES—On Mahaleb. One and two years. Ea. Richmond, Dyehouse, Montmorency, Wragg, Royal Duke, in small supply.

PEACHES—We excel in Peaches, and of these we will have as fine a stock as we have ever grown, both in one year and June Buds.

ROSES—Budded. We will have a large and fine stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.

PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.

MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

See Price List for particulars.

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HUNTSVILLE, ALA.

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Send for samples and prices. Our reference are the largest nursery men in the United States.

The Denney Tag Co.

WEST CHESTER, PENNSYLVANIA

To All Nurserymen

WE offer a most complete line of **HARDY ORNAMENTAL TREES, SHRUBS, VINES, EVERGREENS and PERENNIALS.** Also **TREE and SHRUB SEEDS** in a full assortment of varieties, including many valuable species. **FRUIT TREE SEEDS and SEEDLINGS, RED STAR BRAND RAFFIA and NURSERYMEN'S SUPPLIES.**

Every nurseryman interested in knowing where to get the stock he wants to the best advantage, should send for our catalogue and lists showing the vast assortment of stock we offer.

All stock offered is of the highest quality. Stock that will give the most satisfaction. Send for our lists at once, they will interest you.

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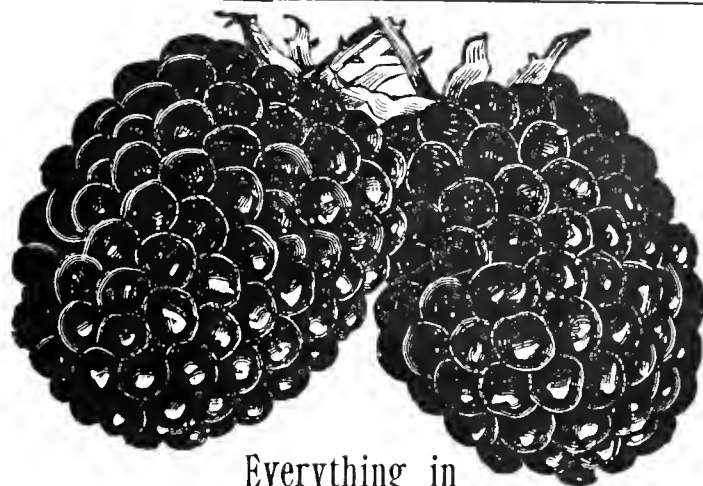
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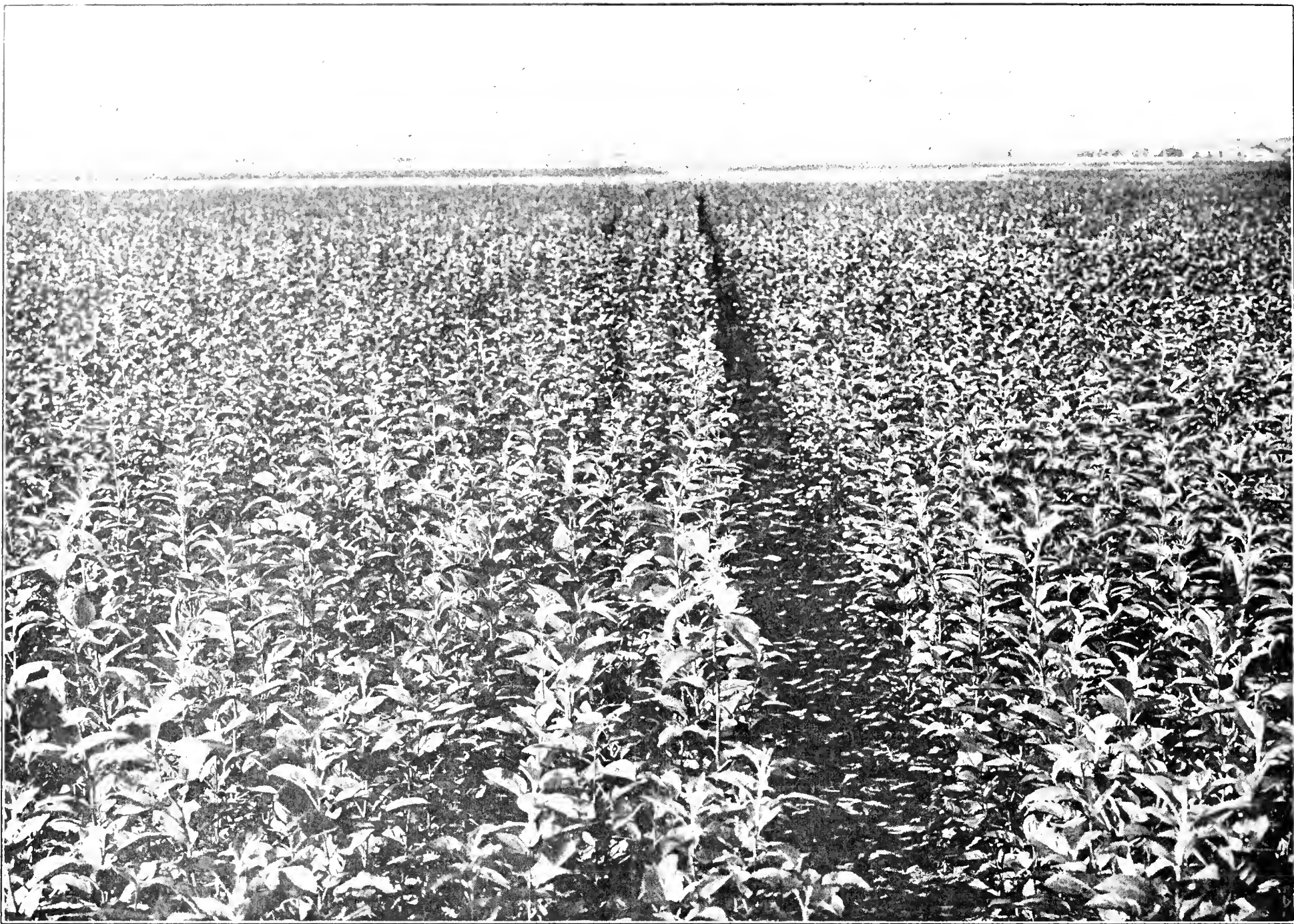
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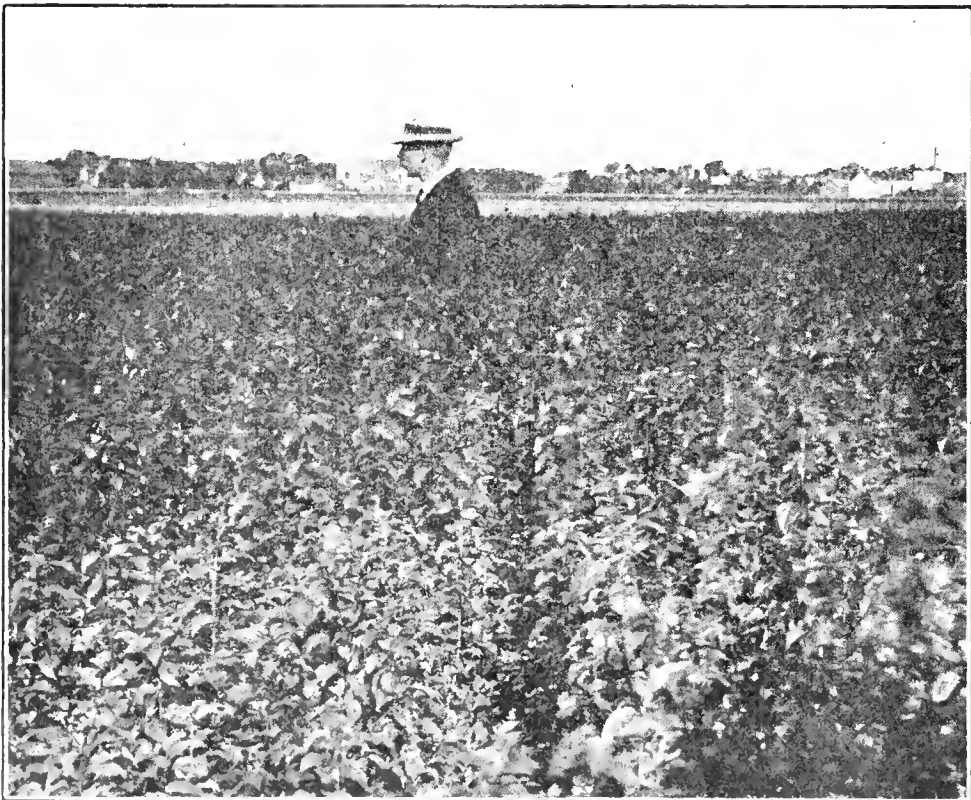
Small Fruit Plants for the Nursery Trade, Fall 1911

Black and Purple Raspberry Tips, Red Raspberry, Blackberry, Dewberry,
Gooseberry Layer Plants, Orange Quince, Gooseberry and Currant Cuttings,
Asparagus, Horseradish. Rhubarb 1 and 2 year old Roots, also divided Roots. Write
for prices.

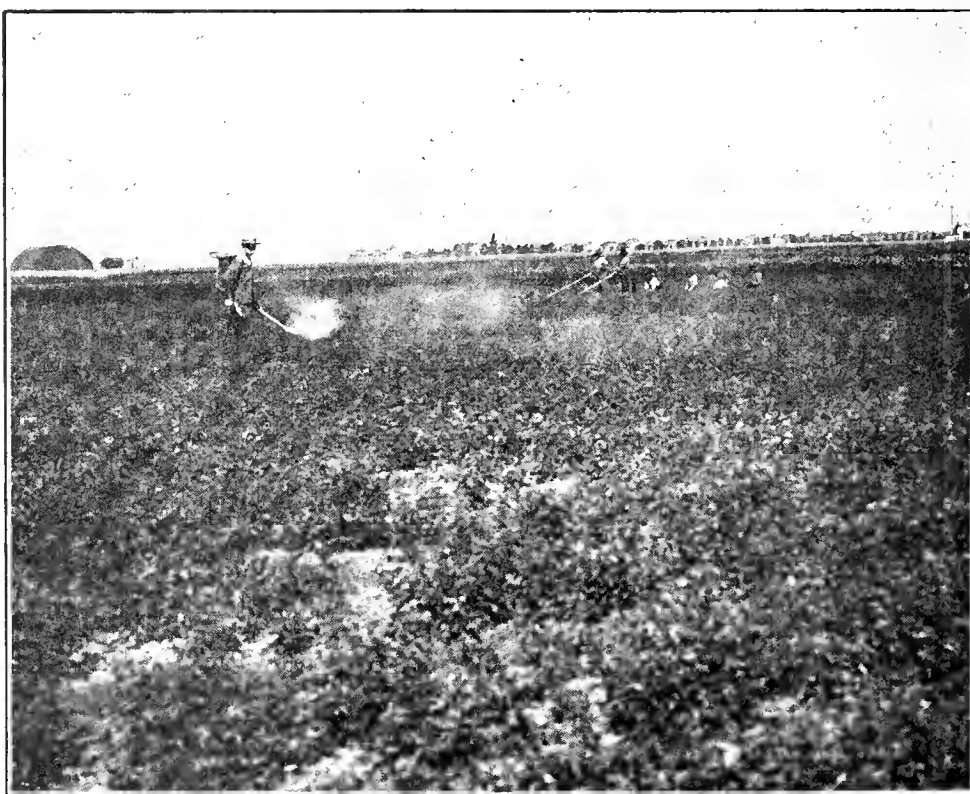
P. D. BERRY, Dayton, Ohio



A field of Apple Seedlings in Nursery of Doornbosch & Son, Veendam, Holland. The Horticultural Co., Worcester, Mass., American agents.



A field of one-year-old Myrobalan Plum in Nursery of Doornbosch & Son, Veendam, Holland.



Spraying Rosa Canina in Nursery of Doornbosch & Son, Veendam, Holland.

DOORNBOSCH & SON, VEENDAM, HOLLAND.

The photographs of fruit and ornamental stocks which we are presenting on this page, were made on the grounds of Doornbosch & Son, Veendam, Holland. This section, we are informed, is a comparatively new region in the Dutch nursery world. The firm in question is making a specialty of fruit and ornamental stocks. The American agent of this firm is The Horticultural Company, of Worcester, Mass.

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XIX.

ROCHESTER, N. Y., NOVEMBER, 1911

No. 11

A COMPREHENSIVE REVIEW OF STOCK AND TRADE CONDITIONS THROUGH- OUT THE COUNTRY

The Season Abnormal in Many Respects; Strong Autumnal Growth of Nursery Stock

THE NURSERYMAN IS LIKELY TO SECURE HIS FULL SHARE OF THE COUNTRY'S PROSPERITY

NEW ENGLAND

The season was dry during July, but abundant local showers since then have occurred, so that our nursery has made an unusually favorable growth. Our business is largely retail and confined principally to ornamentals for general landscape work. Notwithstanding the general impression that people are reluctant at the present time to spend money freely, our business is showing an unusual activity for this season of the year. We find it an economy all around to put into storage for spring work more largely each year, and are equipping ourselves accordingly. There is no doubt of the rapidly increasing demand for choice ornamental stock throughout the Atlantic Coast states, at least. There is an increased willingness each year to pay a fair price for well grown stock, large sizes for immediate effects being in steady demand.

New Haven, Conn. THE ELM CITY NURSERY CO.

We are glad to give you our season's report, which has been varied, to say the least, from the first day of March up to the present writing.

The frost was not out of the ground here until April 15th. Our planting was done during the dry month of May, and we figured at that time, we would get a 20% stand, but Nature seemed to favor us and we have from 80 to 90%.

The whole season has been very dry up to September 1st, and our stock has made a fair growth, as good as could be expected.

Our retail sales are some 20% ahead of our sales last year, but we have made an extra effort. We believe stock is not selling as well as it did in the season of 1910. Of course, apples are in good demand, and on some varieties, there will be a decided shortage next spring.

Our wholesale trade has been good, and we do not expect to have a surplus when the season closes.

This summer we have added a new concrete storage building, 75 x 100, on the saw tooth plan. This is something every nurseryman needs, if he wants to get his orders out on time.

Your question on the management of a nursery is a rather hard one to answer, and we do not think we are in a position to do so, but would say, it means continual hammering, grow

good stock, deliver when you agree to, and give fair and square treatment to all. Working along these lines, we believe results at the end of the year will be satisfactory.

We are not handling many new varieties, but would very much like to see about 60% of the old ones cut down, and we trust the time is not far distant when the Association will take this matter up and get the majority of the members to do this when issuing their catalogues.

Manchester, Conn.

C. R. BURR & CO.

At my nurseries, both here and in North Carolina, the season has been extraordinarily dry, seriously effecting the start of nursery stock, and making the growth very slow. Later rains have done much to equalize the growth, and on the whole, stock has not suffered seriously.

It has had considerable effect, however, on trade conditions, and has made a great many customers put off planting, fearing the drought will continue.

Naturally, in my trade, Rhododendrons, Azaleas, Andromedas, hemlocks, and similar stock are most in demand, as my specialty covers the best hardy native plants.

This season I have almost doubled my plantings of the more valuable stock, cutting out the common plants in many cases altogether.

It is my opinion that this is the future of the nursery business, and specializing will come to be more and more a necessity in good nursery management.

Of the most promise of the rare plants I offer, are the Carolina hemlock and Rhododendron punctatum, which not only have proved hardy but will stand unusually well in difficult situations, particularly the Rhododendron, excepting in the coarsest kind of planting.

A great many of the loose growing shrubs, such as Cornus stolonifera and similar plants, will be used less, and this will require a much closer discrimination in the varieties grown by the nurseryman.

Fall business is about as usual; outlook for spring unusually good.

Salem, Mass.

HARLAN P. KELSEY,

We had it very dry here during the spring and early summer. The growth of stock was poor before the rains

came, but the later growth is good. Trade conditions are fair, and we have more demand for ornamentals than anything else. We find it necessary constantly to enlarge our plant.

North Abington, Mass.

W. H. WYMAN.

The season has been somewhat exceptional with us, being very dry in the early part of the summer, with plenty of rain later on. This naturally retarded the growth of the stock in the early part of the season, but the plants made it up later on; and as a general thing, we think they have made as much growth this year as during any other.

As to trade conditions, would say we have nothing of which to complain, as our business this year has been very good, much better than we expected. The early demand for evergreens during the first of August was small, of course, on account of the dry weather, but the later rains have made them begin to move to our satisfaction. As to the kind of stock in demand, it seems to be a general line.

In regard to improvements, we are using more land for planting out as fast as we can get hold of it. Up to the present time, we have enlarged our plantings up to 500 acres. This year we have made no increase in business facilities, as our place has been thoroughly equipped for several years.

Elizabeth, N. J.

THE ELIZABETH NURSERY CO.

We have passed through a summer of extreme heat and drought, the effect of which has been to cut the growth of nearly everything. Commencing about Sept. 1st, we have had abundant rains, so that with us nearly all stock has made more growth since that date than the entire season before. It is too early yet to forecast what the fall sales may bring us, as in this section the demand comes late in the season. There seems to be a fair demand for almost anything that is well grown.

Elizabeth, N. J.

HIRAM T. JONES.

NEW YORK

A PROTEST AGAINST STORAGE CELLARS

In this age of material progress, anyone criticising the methods of conducting the nursery business will incur imminent risk of securing not perhaps the hostility, but certainly the pity or scorn, or both, of the up to date nurseryman. Expecting this, I nevertheless enter my protest against the practice of storing in frost proof cellars—trees and shrubs of nearly all descriptions and varieties. From the commercial nurseryman's point of view, it is doubtless a great convenience, enabling him more expeditiously and more economically to handle his spring business. Upon that plea the practice can be justified. But to declare that it is good for stock so stored is another matter, and such declaration is influenced more by personal desire and convenience, than by sober reflection and judgment. To pretend that trees corded in great piles will be in better condition in spring than if left in the ground outside under natural conditions requires for its acceptance and justification a degree of credulity that I do not possess, and which my experience and observation contradict. That such trees will start more slowly in spring is certain, not so much because of retarded development as because of impaired vitality. There are plants used in the nursery business that must be stored somewhere if they are to survive our northern winters; but they ought to be considered, as they are, exotics. Such plants are wanted in localities where they are hardy, and even in localities where they are not hardy; and to have them at all, they must be stored somewhere free from exposure and winter killing. But to pretend that fruit trees generally are advantaged by such treatment is a mistake, and a mistake known as such by its practitioners, whose interests warp their judgment. It is as logical to pretend that trees packed for months will keep

better and be in better condition than will trees that are freshly dug and, with the least exposure, transplanted. There are many fallacies current in the world whose origin and practice can be traced to self-interest, and not to any belief in their necessity for the advantage and benefit of man. The indiscriminate storage of trees in winter is one of the practices, and from the viewpoint of the consumer is nearly an unmixed evil.

Flushing, N. Y.

THEO. FOULK.

It affords us pleasure to say, that while this season has been an exceptionally dry one, particularly the early part, stock on the whole has done remarkably well, especially anything which was established, due principally to constant cultivation.

Buds and two year old trees will compare favorably with those of last season, whereas seedlings did not make their usual vigorous growth; nevertheless, the percentage of loss is slight.

During early summer, trade conditions were slow, there being a light demand for cherries, plums, and standard pears. However, the situation improved during August and September, hence there is, in this section, a very small surplus on these items at the present time.

Apple and peach trees have been and still are commanding good prices, and it is more than probable they will continue to do so throughout the season; for there is an unusual number of this class of goods going West, especially of the former. Indications, we believe, justify us in saying that cherries will bring more satisfactory prices during the coming spring months than they do today.

TOO MANY VARIETIES

We are very glad to have an opportunity of suggesting to nurserymen that there are altogether too many poor and actually worthless varieties of apples and peaches being propagated which should be eliminated entirely. Neither soil nor climatic conditions, no matter how favorable, will ever make them desirable for commercial planting; for when same come into bearing the fruit has no particular value and naturally discourages planting; whereas, if we all discard such kinds and advocate the propagation of varieties with some merit—and those that will net profit—it will stimulate planting wonderfully.

Too many growers never consider the retailers' needs, but continue to raise strong growing varieties, regardless of the quality of fruit that same produce; and just as long as these inferior varieties are grown and offered at a bargain, they will be sold to the planter.

Growers are losing money under such practice, for the planter cannot reap satisfactory profits from an orchard producing valueless varieties; consequently, he does not expend what he would, if that same orchard embraced varieties which would net him good substantial returns.

Give the quality instead of handing out a "lemon," and you will find your trees moving at better prices; for every wholesaler is dependent on the planter, through the retailer, for the consumption of his goods.

We trust that those who anticipate doing much grafting this winter will give the above suggestions some consideration.

STORAGE CELLAR SATISFACTORY

One year ago the 15th of the present month we completed our cold storage (120 x 80 ft.) built of brick and tile. Stock kept throughout the winter in fine condition, and we earnestly hope every nurseryman is as well pleased with his storage plant as we are with ours.

We desire to impress upon nurserymen the importance of floor ventilation. It is almost an absolute necessity to have ventilating doors and shutters close to the ground at both

ends of the alleys, thus furnishing circulation where it is required most. You will be surprised what this method of ventilating will do for you.

Storage roofs have given all of us considerable trouble. We went over this matter very thoroughly and finally decided to use a Monitor-shaped roof. While ours has had the exposure of but one winter, we are positive it will give equally as good satisfaction for many years, because we have ample light and a roof that will not leak.

The building in question being 80 feet in width, it was thought best to make the lantern, so called, 20 feet wide, running the full length of the storage with almost a continuous row of windows on either side, having inside blinds operated with cord and pulleys to shut out light when so desired.

The roof slopes at a pitch of one inch to each foot, there being no cupolas, gutters or obstructions of any kind, which means it is simply impossible for it to cause trouble—if there has been a good job of roofing done. It is beyond any question decidedly better than the saw-tooth form.

The nurserymen here are all very busy shipping. However, we believe there is not as great an amount of trees to be shipped from Dansville this year as last season.

Dansville, N. Y. MALONEY BROS. & WELLS CO.

We have had the most unusual season that we have ever experienced. Right after our spring planting, we had some hot, dry weather and no rains for over six weeks. This was hard on grape cuttings and small fruit plants, and much less than the average amount of stock grew. This gave what stock did start plenty of room, and with the splendid rains later in the season the vines have made a strong, vigorous growth both in root and top. It is early to say what trade will be, but from the present outlook, we think there is going to be a good demand for vines, especially in all lines of small fruit plants, such as currants, gooseberries, and blackberries. Among the newer varieties of currants, the President Wilder is receiving much attention, and it is deserving. The bush is a strong, upright grower and very productive. One excellent point is that the fruit hangs on for weeks without shriveling after it is ripe. Good plants can be bought at reasonable prices, and varieties like Red Dutch and Victoria should be discarded, in favor of the President Wilder.

Fredonia, N. Y. T. S. HUBBARD CO.

One and two year stock has made about its usual growth, notwithstanding the drouth during the early part of the season. It showed its effect on the spring planting, but I believe that is general. Trade has been very good with us this far, and all stock seems to be in good demand, especially apples and peaches; and from present inquiries, it seems as though almost all lines will be picked up closely.

Geneva, N. Y. RICE BROS. CO.

The early part of the season was very dry and retarded the growth of peaches especially. Likewise the extreme hot weather prevented the salesmen from doing the average amount of business during these months. Apples and peaches seem to sell more easily than any of the other fruit stock. We don't think we have much to say on the other questions except that our storage plant works very well, and there don't seem to be many new varieties which sell to any extent.

Geneva, N. Y. THE R. G. CHASE COMPANY.

We are glad to be able to say that stock has made good growth and is looking well, in spite of the fact that June and July were very dry.

We are also glad to state that trade conditions are thoroughly satisfactory. That is, the volume of business we are

receiving is somewhat greater, and this in spite of the fact that we have reduced the sale of apple trees more than 60%.

We have always made a strong effort on ornamental stock, hence our sales of this class are always much larger than that of fruit trees.

Rochester, N. Y.

GLEN BROS., Inc.

CONDITIONS IN PENNSYLVANIA

We had a very backward spring—cold and windy during April, followed by a fortnight of very dry, hot weather in early May, causing vegetation to start slowly.

After the dry spell and the real start of spring, we had a very fine season with slightly under normal rainfall until about September; since when we have had a little more than the average rainfall; but all stock has made an excellent growth, healthy and vigorous.

Trade conditions at this time are very satisfactory.

Apple and peach, especially the latter, are in heavy demand. There are also gratifying inquiries for grapes and small fruits.

Any new implement or tool of merit offered is immediately added to our very complete equipment. We greatly increased our plantings last spring and doubled our peach area this fall. Are just completing a modern storage house and will enlarge our business throughout every department.

We believe in as careful, conservative, honorable management of the nursery business as is given to the banking business; exercising care to recommend only such articles as are of proven value; keeping cost and other records properly.

The following new fruits give promise of great value: Pure Gold Peach; U. S. Standard, Money Maker and Sunshine Plums, all of northwestern Pennsylvania origin. Very hardy and productive; of excellent quality.

We appreciate THE NATIONAL NURSERYMAN and consider it of great value to the nursery interests.

Girard, Pa.

PENNSYLVANIA NURSERY CO.

TOO MANY VARIETIES

We had no rain in the month of May until the 31st and the thermometer ranged from 85 to 90 every day. This was the hardest season on transplanted stock that we remember. The loss was very heavy on small stock that was not strong and well rooted, although we got a good growth on everything that was planted previous to last spring.

From present appearances, there seems to be about the usual demand for nursery stock, although our trade is principally in the spring. There is a great demand for apples and peaches, as they appear to be a short crop in the country; other kinds of fruits have a rather dull sale.

We find each year that we have to increase our buildings to accommodate the increasing business.

We do not know of anything new to state in the hints on nursery management or new varieties of fruits. Our list of old varieties is too long and we try to decrease it every year, but it is difficult to lay off any of the old standard sorts.

West Chester, Pa.

HOOPES BRO. & THOMAS CO.

The early part of the season with us was very dry, but by careful planting we managed to get about an 80% stand of practically everything that was set out, some items doing very much better than this.

Visitors to our nurseries say they look in splendid shape and the stock strong and clean.

So far as the trade is concerned, the tendency with us seems to be a good demand, though we have not in any way attempted to raise prices. We have a larger stock of shrubbery than ever, and especially of hardy roses.

Also we find among nurserymen and especially park superintendents the demand for Canna Lilies definitely and strongly on the increase. We are expecting to introduce

some new varieties quite in line with the high standard set by our introductions of recent years.

We shall appreciate the opportunity of reading your November issue.

West Grove, Pa.

THE CONARD & JONES Co.

As a result of the excessively dry weather during June and July, the growing season in Delaware for 1911, I find, has been most unfavorable for the production of a number of sorts of nursery stock. The loss was heavy in newly set cuttings, as well as in fruit tree stocks set in the early spring. Conditions were more annoying to us this season, in this respect, than in any previous season in my twenty years' experience in the business at Milford.

Judging from the number of orders which we already have on our books for fall delivery, and from the number of inquiries for stock that come daily to our office, especially inquiries for peach and apple trees, it would seem that peach and apple are the leaders for the present. Today, apple trees are much more in demand, locally, than peaches. Kieffer pears are still being planted to some extent, throughout our State and Peninsula.

During the past two or three years we have had hardly enough stock of our own production, after taking care of our large retail trade, to offer stock to the wholesalers and dealers; but this year we have about doubled our usual plantings of peach and apple, and hope in future seasons to be in the game more extensively.

Milford, Del.

THE DELAWARE NURSERIES.

GEORGIA

The season has been hot and dry in the South, but in spite of this, trees have made a good growth where well cultivated and fertilized. The hot, dry September has hastened the maturity of stock, and it will be in good condition for early fall shipment.

The demand for commercial orcharding is much reduced as compared to former years, but there is an increasing trade in retail lines which offsets it. There is considerable call for apples in the Piedmont section of the South.

The tendency in prices is steadily upward, though the advance is not as rapid as we feel conditions should warrant. Trees have been sold too cheap these many years, but our Southern Nurserymen are coming to realize that they are entitled to better prices.

Our larger nurseries are all making improvements in handling their stock. Larger, better and more modern packing houses have recently been built by a number of our Southern concerns. Improvements are also being made in many lines of field work and in office organization and management. To live under existing conditions, our nurserymen find it necessary not only to grow good trees, but to grow them cheap.

Smith Brothers have recently completed another large packing house, which gives them splendid facilities for handling their output. In connection with this work, they have put in a new water system to supply the packing houses, offices and homes, from which they get much pleasure these hot, dusty days. Smith Brothers have also found it necessary to build an addition of two rooms to their office to meet the growing business.

This firm has recently added two hundred acres of land to their nursery plant, which makes a total of fourteen hundred acres. The lands are so located as to give the greatest variety of soil from light sandy, to heavy clay.

Mr. J. H. Smith has just completed a handsome new residence. Mr. C. T. Smith also has a new home under construction, which he hopes to have completed by spring.

The location and character of these buildings would indicate that this firm is in business to stay.

Concord, Ga.

SMITH BROTHERS.

THE MIDDE SOUTH

The past season was very unfavorable for the growing of nursery stock up until about August first. Since that time, we have had plenty of rainfall.

Our apple grafts and cuttings planted last spring have very poor stands, in some blocks not half a stand, especially the grafts. Established stock, such as Dormate, made very good growth. One year budded apple have made an excellent growth during August and the fore part of this month. Trade conditions are equally as good, if not better than last season. There seems to be a very strong demand for one and two year apple, in such varieties as York Imperial, Jonathan, Grimes' Golden and a few other varieties, including Stayman Winesap. We are of the opinion that the last named variety is going to be overdone.

Peach are in good demand. Standard pear and some varieties of cherry do not seem to be in quite as much demand this season as last, however, the prospect for this fall's and next spring's business seems good. We are enlarging our planting considerably next season, in order to meet the increased demands for our stock.

We would be very much pleased, if the management of the nursery business could be so conducted that there was more distinction of prices between the planters and the nurserymen.

Westminster, Md.

J. E. STONER.

We do not grow anything in the nursery line. We handle natural peach seed for the nursery trade. Would state that the crop is practically a failure this year and very few seeds are being offered.

Hickory, N. C.

HICKORY SEED Co.

Everything is looking good. Business or trade up to this time is double that of any other season. We have just bought and had our deed to a fine plantation, containing some fine bottom land near Bostic, which we will plant to nursery stock.

We are preparing to erect on our grounds in Bostic a greenhouse in connection with the nursery business, to be used principally for rooting plants, cuttings, etc., for transplanting to nursery.

Our ornamental trade increases each year, and we are preparing to more than double our annual output.

Bostic, N. C.

VALDESIAN NURSERIES.

Although we had a very dry season, we got good growth by intense cultivation. A good deal of transplanted stock died. Trade conditions are good, with a general line of stock in demand.

Pomona, N. C.

J. VAN LINDLEY NURSERY Co.

We had wet and cold weather early, then very dry throughout the season.

Spring planting not average stand—heavy loss of evergreens especially. Late growth at present of apple and peach. Trade prices nearly as good as retail prices.

Apple trees are much in demand.

Our business increased somewhat this season, our territory embracing nearly every state east of the Mississippi.

We think very many improvements can be made in packing. Our experience along this line with stock shipped to us has been very unsatisfactory indeed, even some foreign goods reaching us in unsatisfactory condition.

Lowry apple is promising. This is an old variety, but has only come into prominence the past few years.

Lincoln Coreless and Early Harvest pears, we think, should be discarded.

Richmond, Va.

W. T. HOOD & Co.

THE MIDDLE WEST

The season of 1911 opened up with much wet weather, same continued until about May 10th, when very hot weather followed with almost no rain. All spring-planted stock suffered from drought for almost three months. All two-year stock came through this torrid heat in pretty fair shape. Apple grafts and all cuttings, however, made no headway, and most of this stock died. All nursery stock is in good demand, apple and cherry leading.

Would say that general trade conditions are fair. Could not say that there is any variety of new tree fruit that promises to succeed our most popular old varieties. Old and worn out varieties will, however, have to give way to new varieties. This work of rooting out old sorts is slow. I still have calls for Little Romanite and Rawls Jennette apple trees, while the Early Richmond and Montmorency cherry still stand at the head of the list of sour cherries, as they did twenty-five years ago.

Belleville, Ill.

L. F. DINTELMANN.

ABNORMAL CONDITIONS IN ILLINOIS

The season just closing has been an unusual one. Spring opened up early and warm, followed by weeks of cool, cloudy weather with some rain. During the last weeks in April weather became warm and dry, and this condition continued through May with abnormally hot weather. June was a record breaker for heat, being the hottest June ever known in this section. From this it will be seen that during the heaviest planting season we suffered from moderate drouth and extreme heat, followed by abnormal heat and drouth, making cuttings, seedlings, and small plants lined out almost a complete failure. Out of over 300,000 root grafts, cuttings, and small stock lined out, we have little over 100,000 growing. Had we not given these plants the very best of attention, the failure would have been almost complete. The tree seed came to a good stand, but burned off repeatedly. Where we should have had at least 100,000 Silver Maple seedlings, we had about 5,000. One bed in which we sowed 4 lbs. excellent *Catalpa speciosa* seed is yielding less than 1,000 seedlings. So far as we are able to learn, all nurserymen in this section suffered as much, or even more than we did. Our two year apple blocks, which we usually succeed in growing 25% $\frac{3}{4}$ " and up, 40 to 50% $\frac{5}{8}$ to $\frac{3}{4}$ ", 20 to 25% $\frac{1}{2}$ to $\frac{5}{8}$ " and the rest in small stock, is so largely small grades this year that we will let the block stand another year, digging the best stock by hand. Our peach, while making good growth, are not as heavy stock as last season. The established ornamentals seem to have suffered less than the fruit blocks. On the whole, with the exception of the small stock, grafts, cuttings, etc., and the seed, the development of our stock has been satisfactory, although not up to normal years. In the last five weeks, we have had a little over 20" rain fall. We have some stock that was almost ready to die, but the rain made much improvement in our blocks. It will make digging much lighter than usual.

Trade conditions are satisfactory, and indications are that our fall deliveries both in fruits and ornamentals will be far above the average. The demand for apple and peach in all grades has increased by bounds within the last two years. Well grown stocky shrubs and large ornamental trees are in great demand, owing to the increase of landscape architecture.

Within the past season we have added five acres to our nurseries actually devoted to growing stock. We have erected a new concrete storage cellar with a double wall, double paper lined packing and storage shed over it, which enables us to handle our stock much more safely, and economically. The concrete cellar is frost-proof, while the shed over it is very warm, but not frost-proof. We have added to our office force and equipage for doing business, which enables us to handle our business with more dispatch and satisfaction both to ourselves and customers.

We find in this vicinity the only safe way to grow apple stock is by manuring a block as soon as it is cleared, growing a crop of corn the first year, and a crop of oats seeded to clover the next year. We cut the first crop of clover for hay, the second crop usually makes us a profitable crop of seed. As soon as the seed crop is removed, we put on another coat of manure, 500 lbs. of Tennessee rock phosphate to the acre, and turn it under in the fall. Handled in this way, we usually get the percentage of the heavy grades indicated above. Of course, the extreme heat and moderately dry season we have just suffered was an exception. We think if every Illinois nurseryman who has made much complaint lately of failure to grow profitable crops of apples were to try this plan, his success would be marked.

Owing to the heavy demand from the West for these sorts, we are now growing winter Banana and Stayman Winesap, but will have none to offer to the trade for a year or two. Our stock is from the Grand Junction district of Colorado. Several new pears have attracted our attention lately. One of them originated from the root sprout of a Kieffer that had been killed by blight. It certainly is the heaviest fruiter we have ever seen. The foliage of this new pear is even more thick and glossy and somewhat more round than the Kieffer. In growth it is more spreading and less branched than the Kieffer. The young fruit setting on this sprout, which is but six or seven years old, resembles very much the set of cherries on a cherry tree during a season when that fruit bears a full crop. The fruit is about the size and somewhat of the shape of Garber, only more flat and Quince-shaped. It has a flavor peculiar to itself. In some respects it is better than the Kieffer, yet it is more insipid. Its general "ear marks" indicate that it is a hybrid from the Chinese Sand Pear, and is, therefore, one-half sister to the Kieffer and Garber. As it has only fruited for three seasons, including this season, we are unable, from our short observance, to make definite statements, but on the whole consider it a promising sort. The parent tree or sprout is near our nursery. Another new seedling pear that has been brought to our attention is situated in Bloomington, Ill., some 25 miles distant. We have tasted the fruit and it is excellent. The peculiarities that belong to this tree are, first, regular and heavy bearer; second, length of season. Some fruits begin to ripen in July and fruits continue to ripen until frost, with only partly matured specimens still on the tree at time of winter setting in. For family use we would consider this quality of the tree as very valuable. We doubt its value as a commercial sort. Last but not least, is its thrift and freedom from disease. We will watch this sort and report on it.

Of the standard sorts of apples now grown in this vicinity, we would advise the discarding of Missouri Pippin. While it is thrifty and produces well, the quality of the fruit is so poor that we cannot recommend it.

Hopedale, Ill.

J. W. GRIESEMER.

The season was a very hot and dry one with us. We had very little, if any, rain from about the first of May until the latter part of July. Consequently, stock did not make the usual growth and the dry season was extremely hard on transplanted stock, such as imported and ornamental seedlings. Stock that was already growing in the nursery has made up very well, and we have had plenty of rain the latter part of the season.

At present it appears that we will have a good trade this fall. There seems to be a good demand for everything except cherries.

We have not made any changes or improvements in our storage equipment. We have two large frost proof storage cellars connected with our packing house.

We are not at this time propagating any new varieties.

We have had an overabundance of rain here the past three weeks, but the weather has now turned clear and cool and

we hope to be able to go ahead with our fall business; but the mud is very deep just at this time.

Bloomington, Ill.

THE PHOENIX NURSERY CO.

With us the past season has been one of extremes. Our planting was delayed by excessive rainfall, and the month of May being very dry and hot, we suffered partial loss of the stock planted. While the growing season has been anything but ideal, our stock in general has made a very satisfactory growth. We made the greater part of our planting last spring at Seymour, Ind., at which place we shall, within a year or two, make our headquarters.

Trade demands seem to be fully up to the average, while our retail business is very much better than usual.

As a hint on nursery management, we believe that nurserymen should exercise very much more care as to their bud and scion supply. There has been in the past much written along the line of "selection," but it has been our experience and observation that instead of "pedigree" and "bred for bearing" strains, we, in buying buds and scions from the average nurseryman, are just about as liable on an order for Grimes' Golden to get Ben Davis or perhaps two or three varieties in mixture, as to get the kinds ordered. Mistakes at times are liable to occur, but there is no excuse for so much downright carelessness. There is so much similarity in appearance of some varieties in the nursery row, as for instance that of the Ben Davis and Gano, that mixtures cannot at all times be detected from the genuine.

It seems to us that the only way that we can be absolutely sure of our varieties is to renew our supply of buds and scions every few years from bearing trees.

Rising Sun, Ind.

THE CUNNINGHAM NURSERY CO.

On account of the extreme drought just after our planting season, extending until August 15th, with only about $\frac{3}{4}$ inch rainfall from April 12th to the above date, our stock transplanted last spring suffered considerable damage, but the stock that was established did fairly well and made a satisfactory growth. We will have about our usual stock to offer this fall and next spring, but next year we shall be short on many items.

The demand seems to be strongest with us on first grade apple, peach shade trees and forest tree seedlings.

Have purchased a deep tillage plow and are now breaking up our ground 18 to 20 inches deep for next spring's planting. By this means we hope not only to conserve moisture for another dry season but, be enabled to get our stock out earlier in the spring.

Believe the trouble with all of us as regards varieties is that we try to be able to fill any order which comes to us; if we could by means of publicity or otherwise confine ourselves to a few of the very best varieties, we have no doubt but it would be best for both the nurseryman and the planter.

Greenfield, Ind.

J. K. HENBY & SON.

I am 82 years old, feeble and worn out. I attend the meetings more to meet old friends than to try to push the thing along.

My son has been helping me only two years, so we are really not in the swim. My son wishes us to confine ourselves to two or three specialties that we understand, Gladiolus, Hydrangea arborescens, grandiflora, etc. We have not a fruit or shade tree in the place, so you see our nursery interests are small.

Centerville, Ind.

E. Y. TEAS.

We experienced a very dry season until about September 1st, since which time we have had an abundance of rain, really more than was needed. The stock that was established and had one season's growth has done well, but the young stock planted late this spring has suffered more or less.

The demand for stock is good and we believe it will continue. Apples especially are in great demand. We are selling quite heavily on one year buds, mostly for commercial plantings.

We recently purchased a farm of 134 acres adjoining us, and will make a heavier plant than usual in the spring. There seems to be a tendency among progressive nurserymen to grow a better grade of stock than was grown formerly. To do this requires new land or the building up of land already used.

It is almost impossible for us to get new lands, but we have been successful in perfecting an arrangement whereby we get two or more cars (25 tons per car) of manure each week. Since September 15th, 1910, we have received more than 115 cars of manure.

We believe with our present facilities we will be able to grow stock equal to any in the United States.

Bridgeport, Ind.

C. M. HOBBS & SONS.

The season has been a very unusual one. Early spring was very wet, which caused planting to be delayed about three weeks, followed by the hottest May we have ever known, which caused a poor stand of grafts and seedlings, as a whole—only about fifty per cent. This extreme hot weather in May was followed by a severe drouth which lasted until September 1st. Since that date it has been raining a good portion of the time. For the month of September the Government gauge shows 15 inches of rainfall.

Growth of stock has been varied. Two year cherry made about normal growth. Pear and apple are about usual height, but have not filled in caliper as usual, owing to small amount of rain in August. Peach trees have made a very fair growth, not tall, but stocky. Grafts are much below normal, but are growing very fast since the rains, and will help some to make up if they do not grow too late. One year cherry are lighter than usual, and we shall not be able to dig more than half our usual number.

Trade conditions about normal, except prices on cherry, which are a little too low. Other prices are very satisfactory. However, we think the demand will exceed the supply in most lines of stock.

Apple seem to be in great demand, in fact, far beyond the supply. Peach are very firm, in good demand.

Indiana seems to be waking up to her possibilities, and there are being more commercial orchards planted than for several years.

Vincennes, Ind.

W. C. REED.

The season here has been unusual and peculiar. May was very hot and the heat continued throughout the summer. In this immediate vicinity, we had ample rains until the fore part of June, but most of July and all of August was very, very dry. The effect of the weather is very materially shown by the growth of the stock. Our one year cherry have not made up to their usual standard and our two year apple are mostly in the smaller grades. During August, when our apple should have been growing the most, they practically stopped. Our two year cherry made a most excellent growth, and are as good as we ever had. Fortunately, we got our apple grafts planted early and had ample rains after planting. The season seems to have suited them exactly; for we have a most excellent stand and a very satisfactory growth. We had a small block of apple buds, also, which are as good as we ever saw anywhere, many of them being 5-6 feet high and a number of them run 11-16 in. caliper. We, also, secured a good stand on stocks and have an excellent stand of buds. From the present outlook, we think business will be quite brisk this fall and that stock will be pretty well cleaned up in this immediate vicinity. We have had a very strong demand for cherry and apple.

Vincennes, Ind.

H. M. SIMPSON & SONS.

SEASON DRY IN IOWA

Our season here was characterized by very dry weather from the 15th of May until about the 1st of August, accompanied by very hot weather and much hot wind. This did not seem to affect seriously the growth of the stock that was well established, but small things and cuttings were badly injured by weather conditions. The above weather condition covered a great deal of the territory over which we operate and, of necessity, damaged trade to quite an extent. We would say, however, that we think our trade is, notwithstanding the climatic conditions, fully up to the average at the present writing.

We have added somewhat to our general planting this season, and at present writing have about 800 acres covered with growing stock.

We do not think, however, that the outlook for general nursery business throughout the country is as bright as it has been for a few years past; and if we are not mistaken, there will be a curtailing of planting along many lines.

Charles City, Ia.

E. M. SHERMAN.

Our growing season, with the exception of the latter part, has been dry. We had enough moisture during April and May to start the spring planting in good shape, and secured fair stands on most of our spring planting. June and July were very dry, and hot. Rains set in the first of August, and it has been more seasonable since then.

With thoro methods of cultivation, we managed to secure a very good growth, as foliage was good, and there was less fungus trouble than usual.

We are having very nice fall trade, but not as heavy as some seasons. Indications for winter and spring trade are very favorable.

In fruit trees, apple are still in most active demand with us, and in ornamentals, roses.

In the way of storage equipment during the summer, we tore down a frame building of 102 x 125 ft., with walls thirteen feet high, and replaced it with a structure of brick and hollow block walls and a gravel roof, making the addition 115 x 155 ft., with walls twenty feet high, almost doubling capacity of building. This gives us a main storage building of three hundred feet, with an average of one hundred eight and a half feet in width, with side track the entire length of the building. This with our other buildings completes our equipment very nicely for handling our business.

Shenandoah, Ia.

E. S. WELCH.

The season of 1911 has been a favorable one with us. Early spring was favorable for planting, and we got a good stand in everything, with exception of evergreen seed. We had very dry weather during the early summer but by dry farming hard we succeeded in keeping up an active growth through it all. Our apple blocks came through in fine shape with little or no trouble with insects or diseases.

It is hard to tell as yet just what effect the severe drouth and general business unrest will have on spring's business, but we look for quite a slump in retail sales, especially from the parts of the country most affected by the unfavorable weather conditions.

We are growing small fruits heavily and are doing special work in breeding new varieties of Everbearing Strawberries. From over 200,000 seedlings, we have at this very minute some 3,000 to 5,000 new varieties loaded with fruit in all stages of development, and covering the entire range in size, shape, and flavor of the common once-a-year fruited. They bear a larger crop of fruit at regular strawberry time than do the common sorts and then commence again about the first of August and continue fruiting heavily until stopped by severe freezing in fall. The early frosts that kill tomatoes, etc., do

not hurt them. Under separate cover we are mailing you a few samples of some of these new seedlings.

Osage, Ia.

THE GARDNER NURSERY CO.

We never had one good rain during this whole season until about Sept. 1st. Some things lived and grew a little, but tens of thousands of things were killed outright, because they could not live through so many months of pinching drouth.

One effect over all this region is that large quantities of stock, which should have been fit for market this fall, will be undersize and carried over for another year. The shortage of crops in this big inland region will make trade a little less active than usual, but as we are having such abundant rains since September 1st, everything looks green and many men will buy and plant in hopes that next year the good Lord may look with a kinder face upon us.

The kind of stock most in demand is apple trees. There is no doubt about that. There are some old varieties that deserve to be discarded. Some of them we are compelled to tolerate a little longer while the men of genius, like Patten and others, are creating something better to take their place.

Des Moines, Ia.

C. L. WATROUS.

Our season has been exceedingly dry with a great deal of extremely warm weather. Stock that was well established has made a good, vigorous growth, but young transplanted stock has not done so well. Apple grafts especially are a poor stand, due to inferior growth. In regard to trade conditions, I believe they are up to the usual standard. There is a great demand for fruit tree stocks of all kinds. In trees, the demand is very brisk for apple. Prices generally are held quite firm, and I believe the demand will be equal to the supply of stock in nearly all lines.

Shenandoah, Ia.

D. S. LAKE.

The past season has been one of great extremes, both of heat and drought. The season opened very early in Iowa with a water shortage all over the country. By the last of May, large portions of the state were experiencing drought with a very high temperature. The drought continued until about September 1st, but since that time copious rains have fallen. The effect on growing stock in the nursery has been marked.

We had nearly a complete loss of our apple grafts. We do not believe that at the present there is over fifteen per cent. of the stand out of a graftage of 350,000. Cherry trees grew well and seemed to enjoy the drought and apples coming two and three years old made a very fair growth, but not as heavy as during a more humid summer. There seems to be at present a very brisk demand for apples, but cherries seem to be a slow sale. While there are no large growers of cherry in Iowa, yet there are many who have very large plantings and more than they are able to sell at retail.

The best demands are for forest tree seedlings, plums and standard varieties of apples.

At the commencement of this season, we began the building of a very large storage plant. We believe that this is one of the requisites that every first-class nursery should have—storage room for at least from ten to fifteen cars of stock, so they can take up their stock at the proper time and have it stored ready for spring delivery, or well prepared to take care of stock to be shipped in.

While it is said we have passed through one of the most trying seasons, owing to the drought, yet we have found that by constant cultivation we have been able to get a very good growth on most kinds of stock. We tended our nursery up to and including the 15th of August.

We are having a very large demand for Wragg Cherry. It seems to be one of the most promising cherries for western planting. This is one of the varieties that seems to be in

greatest demand: then the Saylor Sweet is doing well with the fruit planting public. There is no doubt now in our minds but that this cherry is identical with Yellow Glass.

We are putting forth a special effort in our nurseries to propagate new varieties of herbaceous and ornamental shrubs. There seems to be a growing demand for this stock. We have discarded in the last few years many varieties of apples that we grew before, such as the Walbridge, Pewaukee, Iowa Blush and a few others. The tree-planting public are getting their eyes open to the fact that it is quality that they are wanting, instead of nice looking trees. The old standard varieties, such as Gano, Jonathan and Winesap, are taking the lead in apples among the commercial planters.

Des Moines, Ia.

M. J. WRAGG.

EXCESSIVE HEAT CHARACTERIZES KANSAS

This has been the most unfavorable season ever. Very dry all season. Cuttings all gone. No rain worth mentioning from March to August. Every grape and ornamental cutting turned under. Growth on older plants poor.

Trade conditions satisfactory. This fall strawberry plants are in the lead. Enlarged 50 per cent. in field plants for raspberry, blackberry and rhubarb particularly.

Black Pearl Raspberry, we think, is a new variety of promise.

Rosedale, Kans.

HOLSINGER BROS.

"Very dry and hot" describes our season. Our growth of stock was rather short, and trade conditions are not any too bright. Peach is in good demand, however.

Rosedale, Kans.

G. F. ESPENLAUB.

I am pleased to send you these few lines, but hope that others will be able to write more interestingly and tell of better conditions having existed in their sections of the country.

The past season has been such as this section of the country has never experienced before, in the history of the business. First, we started with an exceptionally dry spring that ran up into July without any rain and with intense heat. Grafts, cuttings and seeds planted in early spring did not have any rain on them from the time they were planted until the 9th of July, causing the stands of all spring-planted stock to be the poorest that we have had in years. After the rains began in July, we have had very seasonable weather and the growth since that time has been extremely good on a stock that was planted the year before and had established its root system; but the same cannot be said of this season's planting. Trade, however, has held up extremely well under all these adverse conditions, and the demand for stock this fall is even heavier with us than it was a year ago. This is especially true in apple and peach, and the demand runs largely to the heavier grades, although the lighter grades are being picked up for large plantings in the great southwest. With a fair fruit crop all over this section of the country and fancy prices for what there was to offer planting has been stimulated in this section and through a section that was too dry to plant in last spring. Our business for the year will show an improvement over last year, for two reasons: first, because of the greater demand for stock, and second because we will have more stock to offer in both the fruit and shade tree lines. The latter business grows with us each year, owing largely to the vast district that has been improving its streets and parks in the section lying south and west of us, and the trade from this source should expand each year.

Parsons, Kans.

E. P. BERNARDIN.

Our very dry season caused most kinds of stock to make but a small growth. Apple, peach, and cherry are in demand.

Fort Scott, Kans.

HART PIONEER NURSERIES.

Characteristics of the season—very dry, no rain in April or May. Stock did not make a rapid growth, but peach, apple, and plum are fine now; couldn't ask for better. Trade conditions are extra fine, with lots of large orders. Kinds of stock chiefly in demand are peach, cherry, pear, also forest seedlings. Our trade has so increased we had to enlarge our packing facilities last year; trade never was better than this year. We have not sold many new varieties; old ones, True and Tried, seem to have a strong hold.

Although weather has been dry the first part of the season, stock is coming out in fine condition.

Abilene, Kans.

W. F. GOUGH & Co.

February was soaking, then continuous drought, later, light rains, but only surface wettings. Planting largely died, and what did not die is browned and stunted. Discouraged, but demands coming in. Good ornamentals, (our line), and family fruits are in demand. Plant early, leave leaf-growth on bodies till established. Heavy leather foliage stands the heat. We limit to family orchard.

Abilene, Kans.

E. V. FASSOR.

NURSERY BUSINESS BEHIND THE TIMES

We believe that the nursery business in general is about 150 years behind stock raising, and that nurserymen are largely responsible for this, due to the fact that they should be more rightfully called tree growers than nurserymen.

Nurserymen are altogether too careless in their improvement of old varieties; in grading and putting out their stock; and are not making the money that they should make in their business, due to their failure to grow better stock and charge more money for it. We have been practicing for several years, growing superior stock, by breeding it up from selected individuals, and charging more money for it. We think it safe to say that at this time the growers are paying us about double the ordinary price at which stock is sold.

We should like to see nurserymen improve every line of their business, and we believe many are doing it.

One of the greatest evils of the day, is the selling of common hybridized catalpa, by the million, instead of the pure *Catalpa speciosa*. We find in this line, that many nurserymen are not informed upon the source of their seed supply, and a large number of them are gathering seed from trees growing beside the Common Catalpa, which cannot help but be hybridized. In addition to this fact, we know of one man last year who sold 1500 pounds of the common catalpa seed, and the entire product from these seed will be sold as *speciosa* catalpa seedlings. This practice will indirectly injure the whole industry.

Another practice which has probably done more damage in past years to the nursery business, than any other one thing is letting that class of people known to the trade as tree dealers, use the name of the nursery, while the purchaser has no way to distinguish them from a direct salesman. As long as nurserymen keep up this practice, the high standing of their calling can rightfully be attacked by the planters. It is surely hard enough for a firm to take care of their own name, and it should not be loaned out to someone else, who simply purchases stock of them, and over whose business they have no control.

Trade conditions have been satisfactory in nearly every line, though there has been a surplus of cherry.

Stock in demand is *Catalpa speciosa* and apple, which seems to be especially scarce.

In apple we should recommend the discarding of the Missouri Pippin and the Ben Davis, as there are better varieties.

Winfield, Kans.

THE WINFIELD NURSERY CO.

Business in this part of the country has suffered materially on account of the extremely dry weather, retarding growth on

stock out and on farm crops to such an extent that the sales have not been what we expected, though our business shows an increase over last year.

So far as improvements are concerned, will say that we have demonstrated beyond a doubt the advisability of "dry farming" methods, as it was by the use of same that we saved our stock from utter ruin.

We hope to have many prosperous years before we get another like this past one.

Lawrence, Kans.

WESTERN NURSERY CO.

The season here has been unusually hot and dry. As a sample, less than three inches of water fell in May, June, and July.

Growth has been retarded very much, and in many cases more in height than in caliper, thus making many trees unusually stocky.

Trade conditions seem to be as good as could be expected, but on the whole crop conditions, owing to the drouth, are unfavorable over a wide extent of country. The nursery trade sympathizes with the general conditions, and no doubt will be less prosperous this year than usual.

A general assortment, as in other years, is in demand.

We made a larger plant than usual but the unfavorable season will cut it down a good deal. Our storage plant is one of the best in the country, and we shall make no change in it this year.

We should have been glad to enlarge our water supply, but we know of no plan to secure more rain, and irrigation was not practicable. So we had to do the best we could with what we had.

In apples, Jonathan seems now to be in the lead with Grimes' Golden, Rome Beauty, Stayman Winesap, Arkansas Black in good demand, while Ben Davis is losing badly from its high favor of old, and Missouri Pippin is also losing badly. Winesap is also much called for.

No varieties that have been in strong demand have gone out wholly, but demand has fallen off.

It will be noted that, owing to the unfavorable season, we are not able to offer anything in unusual amounts, while we are short in many things, so of necessity our trade this year will be less than usual. We shall certainly be glad to read the interesting reports you will present from our friends in the trade, and hope many of them have had a good year.

Ottawa, Kans.

A. WILLIS & Co.

We had very dry weather at the beginning of the season, the drouth continuing until August 1st.

The larger part of our nursery business is devoted to the growing of strawberry plants. Our fields are planted on very rich soil, and with perfect cultivation we lost very few plants.

A heavy rain came August 2d, and we have had plenty of rain since. Plants grew rapidly, and in all probability we shall have as good a crop of plants as we ever grew.

The prospect is for a heavy trade in all kinds of small fruit plants. The seasons of '09-'10 were both unusually hard ones for growing small fruit plants. Therefore, we have not done much to increase our business.

Among the new varieties of promise are Evening Star and Buster Strawberries, and also the fall bearing varieties, Amerius and Francis. Both these varieties are loaded with berries at this writing, but the supply of plants of these two varieties is much less than the demand.

Holton, Kans.

F. W. DIXON.

HOT IN MICHIGAN

This has been the most fickle and peculiar season we have ever witnessed. The early part was extremely wet and excessively hot, causing vegetation to grow in an unnatural way.

Apple Grafts and much cutting stock was lost through the excessive heat. During budding season we had it very dry, and stocks outside of peach have made a rather light growth. We have about 500,000 peach budded that are prime blocks, but our other blocks, while fair, are not up to the usual standard by any means. On the other hand, our marketable blocks of apple, pear, and cherry are better in comparison with former years than our peach and plum blocks are.

Our trade is very largely with the large Michigan planters for, in fact, our company is entirely owned by large planters, and trade conditions with us vary according to the results obtained from the commercial crop each season. The demand will be equal to last season on apple and about 75% on peach and cherry. Other items about normal.

During the past season we have added the seed department to our business and are now establishing a northern branch at Traverse City, in order to give acclimated stock and save freight to our many customers in the northern part of the State.

Our main suggestion on nursery management would be the initial selection of propagating stock. Too many of our leading nurserymen are budding varieties supposed to be correct on someone's say so. They should be of known parentage, when fewer mistakes and a more satisfactory feeling between planter and nurseryman would exist, and trade be materially benefitted through the confidence resulting.

We have a variety of peach we call Bass which has to the present time proven immune to Yellows and Little Peach. It has a very peculiar foliage and in fruit resembles Chair's Choice. We do not feel that it will always prove Yellows-proof, but we do know from actual experience it is especially immune.

The list of varieties to be discarded should include all those of low quality, regardless of their bearing. Our fruit markets are already too fully supplied with low quality stuff that bears well and looks good. If the fruit business maintains its present volume, we must supply fruits that will be eaten with relish and called for again.

THE WOLVERINE CO-OPERATIVE NURSERY CO., Ltd.
Paw Paw, Mich.

PROSPEROUS

The season, beginning with early spring, has been a very open one and without any frost up to Oct. 1st. The rainfall has been more than normal, which has caused an excessive growth of vegetation. Nursery stock is maturing finely, has an exceptionally good growth and is very promising.

The demand for nursery stock in our business is increasing very rapidly and has more than doubled within the last three years. This season the trade prospects are fine. Standard apples and peaches are most in demand, although in some sections cherries and pears are receiving considerable attention.

We have added to our fields two large farms the past year, which makes over 1,000 acres now cultivated in the nursery business, and yet we are unable to supply all the demands. Our storage equipment is really the best in the world, and our facilities for handling our products could hardly be improved upon. We find in nursery management it is necessary to be absolutely careful and on time with every process of growth and cultivation. Ornamental gardening and parkwork is becoming one of our special employments, and we have made much preparation in stock, with skilled help to care for the same. Our business is flourishing in every department.

Monroe, Mich.

THE GREENING NURSERY CO.

We will say that 1911 has been a very peculiar season with us. Up to the middle of July we were threatened with drought as disastrous as that of 1910. About that time, however, the rains began, and since then we have had a phenomenal growth in nearly all classes of stock. Very much

of it, of course, has not made up the usual size, especially in two and three year old apple, plum, etc. Other things, however, are up to average, and many of them over. This fall we are having an exceptional amount of rain, and it appears now that the ground in this region is getting filled up.

There is a very heavy demand for fruit trees of all kinds, especially plum. The great scarcity of stocks the past two years is probably the cause for this.

The only increase in our equipment this year is the building of a new greenhouse plant for propagating purposes. This comprises about 40,000 sq. ft. of glass.

In regard to new varieties of promise, we think that some of the plum-cherry hybrids of Professor Hansen are developing into future desirability. From present appearances, the Sapa and Opata are two of the hybrids that mark a nearer approach to a desirable cherry for Northwest culture. In quality of fruit, they are very much superior to the Compass Cherry-plum.

Lake City, Minn.

THE JEWELL NURSERY CO.

I have been moving my nursery from Marion to the present address, and am not yet thoroughly established in my new location. I am not prepared to give you a definite answer to your questions. My observations are that the future of the nursery business is encouraging. The past season has been a hard one for the growing stock, although the trees and plants have done fairly well; hope to be able to answer your inquiries more definitely in the future.

California, Mo.

E. HABEGGER.

We had more rain in this section, during the summer, than other places near here; therefore, we have had a very good season. All kinds of stock have made a good growth. We find that we have a much better stand of apple grafts than we expected. Our one-year and two-year cherry blocks have done extra well. During the past year we have more than doubled our plant, and during the year 1912 we expect to build a good sized storage building. Last December our company was incorporated and the larger part of the capital stock sold to G. L. Weleh, Fremont, Neb., and E. S. Welch, Shenandoah, Iowa. We expect to continue to increase our plant each year.

St. Joseph, Mo.

THE KELSEY NURSERIES.

STANDARD VARIETIES IN DEMAND IN MISSOURI

We had a drouth here during May, June, and July that made the growth somewhat lighter than usual, but there is an entire absence of fungous diseases or other pests that are more or less troublesome during a rainy season. In August and September we have had abundant rains, and stock is making up well in caliper and apple are adding considerable to their height.

Trade conditions, we would judge, will be fully up to or better than last year. We have booked very little business for early shipment, but have, perhaps, more inquiries than usual from the trade for staple varieties. The general demand will perhaps be stronger on peach trees, in our judgment, than any other line of stock.

As to new varieties of promise, and old varieties to be discarded, we do not feel competent to express an opinion on this matter. We have noticed that some seasons, there is unusual demand for some old or new varieties, and a few years later, the conditions may be entirely changed. Just at the present time, the Stayman Winesap is perhaps in stronger demand than any other one variety, in many sections. This was the condition the past season, and yet, we are not anticipating that this unusual demand for the variety will continue, in fact, we notice indications from some of the best commercial planters, accepting M. B. Twig as perhaps the better variety in comparison, on some soils. Old varieties like Jonathan, York Imperial, Rome Beauty, M. Blush, Grimes

Golden are still in good demand. It may be that the time has come when the Ben Davis can be discarded. The Gano has the same characteristics and makes a little better showing on the market, and the prejudices that have been largely the cause of the downfall of the Ben Davis have not yet surrounded its cousin, the Gano.

New Haven, Mo.

NEW HAVEN NURSERIES.

The driest, hottest, and worst season in history of our business. Very little growth on ornamental stock until the month of August; spring-planted stock a heavy loss. More orders than last year at this time. Apple, peach, small fruits and a general ornamental line are most in demand. No additional storage equipment over last year. We have a new concrete storage building 80 x 120 x 14, besides a bulb storage room 25 x 50. Prospects for spring business seem to be good.

Nursery, Mo.

H. J. WEBER & SONS NURSERY CO.

CHARACTERISTICS OF THE SEASON

The nurserymen generally at the St. Louis Convention reported practically everything the same—early summer drouth. In some regions, no doubt, spring planted stocks and grafts suffered severely, may be a blessing in disguise. In Missouri ample rainfall came in time, insuring a splendid crop of corn, the late corn the best, and it was this season which demonstrated the great value of up to date methods of corn culture. In our nurseries, after clearing trees, we grow some record-breaking crops of corn, an intensive method of culture which our neighbors and their neighbors are following more and more each season. In the Ozark country at Rolla, Missouri, where we have commercial orchards and a nursery plant, the vacant nursery land is cultivated to corn on rather thin soil, but the Stark Culture Method has been an eye-opener to our neighbors. Some of our corn will yield 60 to 70 bushels per acre, and that in a region that's not considered a corn country. We have produced even more marked results at Marionville, Missouri, and Fayetteville, Arkansas, and the same is true of our crops of cow peas, of clover and the vetches as well as corn, and all through preparation of the soil.

EFFECT ON GROWTH OF STOCK

The average growth even is a surprise, remarkable. In our nurseries in the Ozark mountains, the natural home of the apple, we have produced the handsomest apple 2-yr. and 1-yr. budded and grafted, standard and dwarf, that we have had in many, many years. The stand of grafts is exceptionally good for the season, judging from the reports generally made. The growth is far above the average, the foliage unusually good. Ornamentals have done remarkably well. Some kinds of fruit trees made most notable growth. Everything is the handsomest we have ever produced. Plum has luxuriant foliage and a surprising growth, and all this following a drouth until past midsummer. So much for thorough tillage, conserving the moisture.

AS MUCH OR LITTLE AS YOU CARE TO SAY ON TRADE CONDITIONS

Personally, have been away for some weeks enjoying the bass fishing and the fruit of North Manitou Island, Michigan, the fruit growers' paradise, and we are not quite as well posted as usual on market conditions; but the demand is good, supplies moderate, and no doubt the spring trade will be most active, proving a surprise in many regions, for several reasons, as to supply and demand. The fruit crop is general and that, too, in a region where there has been failure for several reasons, which means a more general planting and heavier average sale, all of which will have a marked effect on the spring markets.

In regard to the kind of stock most in demand we would say the general stock is in demand.

IMPROVEMENTS IN YOUR FIELD OR STORAGE EQUIPMENT OR ENLARGEMENT OF YOUR BUSINESS

The packing houses of today unknown a generation ago; at first considered a luxury, now a necessity; and the opportunities for further improvement are just as great in our line as in many other lines, so that we have a continuous shipping season from October to May.

A TRIBUTE TO THE LATE W. F. HEIKES

We believe it was Emerson who said, "The success of any great institution is but the lengthened shadow of a single man." Often in visiting our neighbor nurserymen at Huntsville, we have commented on the great success of that prince of nurserymen, Nature's nobleman, the late William Fletcher Heikes. A great business he established, and just how it was accomplished nurserymen generally well know. In making those long rides with Mr. Heikes, though he was generally considered a silent man and not over-communicative, he told me of his trials, his failures, his successes, his ambitions; and no man more appreciated having visitors recognize his success than did Mr. Heikes. Some of his feats in propagation were wondrous. He solved the problem of skilled nursery labor; he was the father of the grading system; his yard stick 36 inches long. In years past he recognized some of the evils of reckless dealers' methods, and no man did more than himself to put the business on a higher plane—the Golden Rule, the square deal, everything as good as represented or a little better, no disagreements, everything in good condition, handled just right, the Heikes way a standard of excellence. Therefore, from such influence, from such a life and work, all nurserymen may secure hints on nursery management, whether as to selling or propagation. Mr. Heikes, the one man of all men, was kept youthful in his work because he kept in touch, *personal* touch, with the orchard and nursery conditions from coast to coast. With him it was ever a work of living and learning.

NEW VARIETIES OF PROMISE

Personally, we have done some little work along this line, achieving some successes along with some failures. It is all a question of judgment, experience, the know-how, a question of adaptability. Orchardists are demanding better varieties adapted to each location, just as consumers are demanding quality. Old Ben and Missouri Pippin have been put out of business. A simple proposition when there are better sorts to push them to one side—a survival of the fittest. Orchardists are awakening to an appreciation of the great work that's being done by the Department of Agriculture, the state experimental stations, the volunteer work so generously done throughout the land—it is a work of labor and love, but from it all great things will come and are coming. Truly there is a magnificent future for the orchardist, the nurseryman who works along up to date lines, profiting from all this valuable experience.

The writer recently visited the peach king, J. H. Hale, in his beautiful home among his great orchards, in the suburbs of Hartford, Connecticut. Several times we have enjoyed the same pleasure in the Hale-Georgia orchards. Everyone knows Hale. He has spent a lifetime to secure the ideal commercial peach—he has it. It was the writer's pleasure to christen the peach J. H. Hale, but all this is another story, about which Hale will tell the people later. Only last year Forest Crissey in the *Saturday Evening Post* devoted some four or five pages to Hale and his system of peach growing. Hale is a genius—that's all, but he has made the great big things from the little things; he is a scientist, and this day and age demands scientists.

OLD VARIETIES TO BE DISCARDED

We have mentioned Ben Davis and Missouri Pippin, and there are many others which are being displaced and more to follow, perchance the more the better. Our government, both national and state, to say nothing of our universities and many noble individuals, all are working in harmony and along the same lines to produce better and still better fruits. Wondrous results have been accomplished, and these are but initial to even greater work to follow. To go into varieties is too long a story at this time, and yet educational missionary work is needed, as one may judge when he looks over the shortage list, scions wanted, buds wanted. But orchard planters of today are becoming more discriminating; they, too, are living and learning. They want the best of the very best—they are keeping in touch with market conditions. Great work is being done by *The Fruit Grower* of St. Joseph, Missouri. Brother Jonathan Irvine is one man who is a sure enough horticulturist, a recognized authority, appreciated everywhere. He has done much in the developing of one of the greatest orchard propositions in the Far West. And in the northwestern region, Editor Shepard is doing a great and noble work. Here is another genius; to know him is to enjoy him, but how could a man do otherwise than great work with such an inspiration as he has—the shadow of Mt. Hood? Nurserymen have been invited by our coast nurserymen to come West; they are broad-gauged, whole-souled, generous men. If they were otherwise, they would not invite us to come to make them competition, because perchance the great commercial orchard planting of the West, legitimate, speculative, or otherwise, has not only created a demand, but likewise created too much competition along certain lines, and even now there are some cross-roads nurserymen of the farmer kind who are wondering where they will find a market for their products. The wild demand creates such competition; the lack of it is its own cure and regulator. Those who are not fitted to the business will fall by the wayside. The legitimate kind who know their business, who stay with it may be fairly well rewarded for their labor though they may suffer and be damaged by the kind which spring up overnight, mush-room-like. In brief, the nurseryman's discard list should be his chief assortment and his propagation should be chiefly on up to date sorts of merit, proven, tested, weighed in the balance and not found wanting.

STARK BROS. NURSERIES & ORCHARDS CO.

Louisiana, Mo.

W. P. STARK.

Early in the spring the weather was favorable, but May and June were unusually dry. We have much call for new varieties of iris and peony and the standard varieties of peonies that are suitable for storage cut flowers.

Sarcoxie, Mo.

FRANK WILD FLORAL CO.

NEBRASKA ITEMS

As to the characteristics of the season, in nursery lines, we find them more or less marked, with the retailers somewhat on the anxious seat. The western country started out dry generally. Later, parts of the country have had sufficient rain, while other parts are still far below the normal. The nursery stock through this country, however, is in a very healthy condition, foliage never looked better.

The growth on apple and some other stock is rather short, but caliper is good.

The trade has been somewhat spasmodic, and up-to-date, it would probably stand about 20% to 25% below the normal in orders booked for fall and next spring's deliveries.

As to the kind of stock in demand, the Black Locust seems to be dropping off from year to year, while the Catalpa Speciosa is on the move. Mulberry, elm, ash, maple, etc., for groves and shade, are about normal. In commercial districts, the apple seems to be the most in demand. Cherry and plum are quiet commercially. Also grapes and other small fruits.

As to the condition of the business, we believe the planting among the nurserymen in this section is on the increase. Personally, this season we planted heavier in apple. Grafts have made a good growth but the stand is not satisfactory.

As to the management of nursery work, the cultivator is being used more from year to year, and the hoe and rake less. This country is proving to be one of the best nursery countries we have had the pleasure of visiting.

As to new varieties of promise, I would say, speaking from a local standpoint, that the Windsor Apple is one of the best we have. It is not so new, but is just proving itself to be of great value.

As to old varieties to be discarded, there are many which have been discarded that we formerly thought had to be grown here on account of their extreme hardiness and adaptability, such as Walbridge, Iowa Blush, Lauver, etc. We find we can grow a much better apple and that we can grow almost any variety we wish to plant. Therefore, we have some choice in quality. The Grimes' Golden, Jonathan, etc., seem to be on the move here.

Arlington, Neb.

MARSHALL BROTHERS.

The season with us has been rather dry and a good many of the small plants that were planted in nursery row last spring died through the summer. Still, we have a fair stand of almost everything. We are very short of *Catalpa speciosa* seedlings. Planted 900 pounds of seed but will not have over four or five hundred thousand seedlings, while we should have had at least three million.

Our Black Locust seedlings are fine, also our Russian Mulberries, and most other varieties of forest tree seedlings.

We have bought a building joining our packing house, 50 by 140 feet. This gives us a good deal more room and we will be able to get out orders after this more promptly.

We do not employ agents, so cannot tell just how fall business will be. We have a good many inquiries though for catalogues, and think it will be as good as usual. The same would apply for next spring.

We are getting out a large catalogue and will do as much advertising next winter as usual, rather increase it than decrease it.

Beatrice, Neb.

CARL SONDEREGGER.

Following a very dry winter, we have had a dry spring and summer until August. This seriously crippled the crops of the state, cut them to perhaps half in corn and a moderate crop of wheat. In nursery stock its effects were most noted on seedlings and grafts as the trees and plants that were well established were by cultivation enabled to make a fair growth.

At the recent state fair, the general impression among the nurserymen was that the exceedingly dry season had not only crippled the farmers crop production to a serious extent but had alarmed them so that they were buying fewer trees than usual and trade was difficult to get. So far the kind of stock in demand is mainly apple, plum and cherry. This season again demonstrates the importance of more thorough preparation of the soil and frequent and careful cultivation.

VARIETIES OF PROMISE

Some years ago I planted fifty thousand fruit trees in partnership branch orchards: visiting a number of these orchards this month I find that, following a trying spring like that of 1911, the late blooming apples were getting a fair to a full crop of fruit. Such varieties as Genet, Iowa Blush, Northern Spy, and Walbridge were usually bearing quite freely. Since all these varieties bloom late enough or were sufficiently hardy to escape the very severe cold wave to which central and western Nebraska was subject last spring I do not hesitate to recommend them. The Grimes' Golden was also doing particularly well in central and western

Nebraska. Under trying conditions of frost and storm, it was yielding more freely than the Ben Davis or the Winesap.

The above discussion is limited to the state of Nebraska. In Idaho, where we have successfully planted 370 acres of orchard, we note that it is the only state in the extreme Northwest that reports an apple crop of 100 per cent, thus equalling the heavy crop of the previous season. Climatic, soil and irrigation conditions favor southern Idaho.

NURSERY STOCK IN SOUTHERN IDAHO

The nurserymen of the state of Idaho met at Emmet, July 18th, and conditions as to trade were regarded as fairly promising. The last Idaho legislature passed a very stringent regulation regarding the sale of nursery stock, which was intended to be very troublesome to the outside nurseries, but which will also be difficult to comply with on the part of the local nurseries.

The growth of nursery stock in southern Idaho is very good. Thirty per cent. of our apple grafts are reported as already attaining a height of 4-5 feet, fifty per cent. 3-4 feet, and about twenty per cent. under three feet—a much stronger growth than is attained in Nebraska.

Crete, Neb.

E. F. STEPHENS.

Characteristics of the season—slow sale. Effect on growth of stock—caliper, good. Height below average. Kind of stock most in demand—Plum. Improvements in your field or storage equipment or enlargement of your business—increase about 25%. Hints on nursery management—think nurserymen are too anxious to sell stock, making prices below cost of production. New varieties of promise—none with us.

Fremont, Neb.

B. E. FIELDS & SON.

We had it very dry early in the season with a very meager amount of rain fall until August. The effect of the dry weather on newly lined out stock was bad and it put our budding off until late. However, we have come out so much better than we had reason to expect that we are inclined to forget our drought trouble.

Trade on the road, has had its ups and downs but we have managed to keep going. Sales at this time are nearly up to last year at the same time but we expect the year's sales to fall considerably short of last season's business.

We find the demand for cherry, apple, and grape to lead the fruits, with an increasing trade for shade, ornamental and shrubs.

We have the pleasure of writing our friends and patrons from our new office, which we completed late last season. It is a detached building 28 by 32 feet with a large vault and all modern improvements, and we think that it is one of the best arranged offices for its purpose in the country. We also built a frost-proof billing shed 20 by 100 feet along one side of our storage cellar.

As to nursery management, we find that the best thing we have done for a long while was to incorporate our nursery into a Stock Company (without water), and to let our old and best men have some of the stock. We followed that up by putting more responsibility on them, and if it keeps on as well as it started, we will soon find ourselves with nothing to do but go to the National Nurserymen's Convention and like delightful outings.

As to new varieties, the Compass Cherry has come to stay. It has passed the experimental stage with us, and people are calling for it. Another good thing is the Norway Poplar or Sudden Sawlog. It is fast proving its superiority and hardiness over the Carolina Poplar.

We may be more optimistic than some, but we are of the opinion that when business is wound up all over the country generally, nurserymen will feel they have had a fairly satisfactory year.

York, Neb.

HARRISON NURSERY CO.

Our spring was very wet until planting time, then turned suddenly dry, and we had no rain to do any good until August. Very favorable after that date.

We have a good growth on stock planted last fall and two year stock. We lost many cuttings, grafts, etc., on this spring's planting.

Trade looks good for our line of stock, small fruit plants.

Gooseberries, blackberries, currants, catalpa and other seedling stock are in best demand now.

New Carlisle, O.

W. N. SCARFF.

The season with us has been extremely dry up to the middle of August, and since then we have had more than a normal rainfall, with some damage by hail in limited sections.

The growth of stock has been about 75% of a normal growth, and while fruit trees, etc., are not as large as they should be, small fruit plants are making a rapid late growth.

Trade conditions are about normal. We have very little fall planting in the North, and trade is not active at this season.

Apple seems to be the most in demand with plum and cherry next in order. Only Americana plum are being planted in this latitude with success.

We have no marked improvement to report now, although we shall be obliged to add to our storage capacity, as the business is growing steadily.

We are not booming any novelties and stick to the old tried kinds.

We would not recommend any varieties to be discarded. In the strawberry class, we have dropped both Autumn and Pan American.

Janesville, Wis.

KELLOGG'S NURSERY.

The character of our season has been very adverse. We did not have any rain to speak of in this section from June 8 until August 10, and at the same time, it was intensely hot. However, we gave our stock first class cultivation, and nothing seemed to suffer, with the exception of strawberries and raspberries; but since our rains, and we have had a fine supply lately, they have made a wonderful growth. Our asparagus has also made an excellent growth. This has partly compensated for the backwardness on strawberries, raspberries, and asparagus, which was occasioned by the exceedingly dry weather.

The trade conditions have been very good, considering the above—equally as good as last year.

There seems to be a high demand for apples. There is a strong feeling for more commercial orchard planting. Shrubs in assortment are sold very heavily, as is also a complete line of small fruit.

We have a frost proof building, 140 x 156, which gives us excellent facilities for storing and packing.

Nursery management in the west is tending more than in former years to be conducted under large concerns. The smaller firms, consequent to the adverse conditions, are dropping out of the game.

New varieties of promise are such as the Perfection Currant, Everbearing Strawberries, Meehan's Mallow Marvels, and the Dudley Apple.

There are many old varieties of trees and plants that are being discarded, such as the Gregg and Ohio Raspberries, and the Wilson and Crescent Strawberries.

We think there is a great dearth of instruction in our schools in the rudimentary principles of horticulture and agriculture, that should be remedied, because we are a nation of home-builders. When the home is completed, there are thousands of people whose best interests are not served, because of the lack of knowledge of what to plant, when and where to plant, and what care should be given.

THE COE, CONVERSE & EDWARDS CO.

Fort Atkinson, Wis.

We are pleased to report a satisfactory season on the whole, so far as growth of stock is concerned. We had a little too much rain for comfort during July, a condition that many sections of the country cannot report this season. Some lines of stock are a little better this year than we had ever seen them; peach particularly good, pear and cherry fine. The outlook for business is, we think, promising.

Huntsville, Ala.

CHASE NURSERY COMPANY.

Weather has been favorable here, with the result of satisfactory growth of stock. Trade is normal, with apples and peaches most in demand. Our list of varieties has been revised, so that we think they are about on a balance.

Huntsville, Ala. HUNTSVILLE WHOLESALE NURSERIES.

The present season has been rather an unusual one, with the early spring favorable and then a prolonged drouth with excessively high temperature. May was the hottest on record—between 90° and 97° for three weeks. Small, stock, cuttings, and seeds that needed favorable conditions at that time in many instances were a complete failure.

Selling stock is clean and healthy in foliage and body and we expect a good root system. Apple seem to be in active demand and other stock in proportion.

As to the discarding of old varieties, we have always felt that the nurseryman could reduce his list one-half with advantage both to his customers and to himself. The idea of carrying 60 or 75 varieties of apples when 20 contain the "Cream" is unnecessary, and has seemed a burden to the intending purchaser. Fear of losing a sale because we can't supply the entire list will always make us slow about discarding old familiar varieties. Co-operation in this matter may be worthy of consideration.

Collections have been a little slower than usual, due no doubt to the unfavorable season.

Lexington, Ky.

H. F. HILLENMEYER & SONS.

EXCESSIVE HEAT

The past season has been one of heat, drouth and mystery. We had but little moisture in the soil in the opening part of the season, and got but little rain through the months of April, May, and June.

Never in the history of the Southwest has there been known such extreme continued heat as we had through the entire season. It seemed impossible at times for animal or vegetable life to continue to exist. We did, however, survive it, and the sixth of July we had the first good rain of the season, which was followed by more rain throughout the month of July and early part of August.

It is strange, yet true, that we have, notwithstanding the extreme heat and drouth, gotten a very satisfactory growth on all classes of stock, and I am more convinced now than ever before, that intense cultivation, with a carefully prepared soil before planting, is the method that should be adopted and pursued by all nurserymen, especially those in the southwest.

Owing to the drouth of the past three years, there has been quite a loss in all kinds of fruit trees. This has created a demand for stock in a retail way. Sales, therefore, have been very satisfactory.

Kinds of stock most in demand: Pear, cherry, apple, peach, plum and blackberry. Planters are not buying apple as freely as in past years, while peach, plum and blackberry are being planted in large quantities.

Enid, Okla.

J. A. LOPEMAN.

GOOD SEASON IN TENNESSEE

All told we have had a very satisfactory growing season; in fact, we believe we have been especially favored, plenty of rain and stock has made an uncommonly fine growth. This applies especially to yearling apple, pear, cherry and June buds.

The demand for stock of all kinds continues good, and we are maintaining prices all along the line. The past season we had a large acreage in peas in addition to our nursery stock. This land we will plant in trees next season. Altogether, we think the outlook is encouraging.

Winchester, Tenn.

CEDAR HILL NURSERY CO.

The season for the growth of nursery stock this year has on the whole not been satisfactory in our territory. We have had sufficient rain to prevent any damage resulting to our nursery stock, but the growth on it has not been quite so heavy as it usually is. Trade conditions have been the best in the history of our company, our sales to date being about 20% more than ever before sold. We find the strongest demand for apple. Last year we tried to push the sale of one year instead of two year apple with only reasonable success. This year, almost without effort on our part, our sales have drifted very largely toward one year apple stock. We find also splendid demand for peach.

Last year we bought a farm of 275 acres within one mile of our old farm, which we expect to use for the most part in growing apple. Considering the season, our this year's planting of apple grafts is showing up finely on this new land.

Knoxville, Tenn.

KNOXVILLE NURSERY CO.

THE GREAT SOUTHWEST

Some parts of our state were dry in the early spring, but this section had rains just right from the first of the year until the middle of May. Since then it has been very dry most of the time, but trees made about an average growth from the early rains.

We had the poorest peach and plum crop in thirty years. It improved toward the north, and was good in the northern part of the state. Twenty to thirty years ago, if the peach crop failed, it was hard for agents to make sales. That has all changed of late years, and we have our usual pile of orders.

We look for a perfectly satisfactory trade the coming season. The per cent. of fall and winter orders has steadily increased for fifteen years, and we see signs of a big bound this year.

The demand for ornamentals is increasing wonderfully. Home owners are considering whether it pays to put a \$500.00 piano in the house, and expensive wall paper on the walls, which is seen by few people and used by no one except the flies, while they put \$1.75 worth of shrubs in the yard.

One man figured out that in ten years his wife wanted new paper and a new piano, while if he had spent \$100.00 intelligently in things for the yard the place could have been sold for \$1000.00 more and the value would be still increasing. The people—most of them—are ripe for a little teaching. I make it a rule to challenge any doubter to name a way in which he can spend a little money that will add so much and such lasting beauty, comfort, and value to his home.

Of recent years, some berries have originated in Texas that seem to be crosses between dewberries and blackberries. They simply eclipse anything for certainty of crops, amount of fruit to the acre, and in the amount of dollars easily taken in.

There is a new peach, the Leona, very much like Elberta, that we believe will make everybody simply drop Elberta. The tree is slightly more dwarfish, but immensely more productive. It is a shade earlier than Elberta.

Up until five years ago, when we had a winter almost without any frost, we thought we had a pretty good peach country. Since then we seem a little far south for peaches, of most of the large sized, standard varieties.

It has made us go to propagating twelve or fifteen varieties of smaller peaches on the style of ordinary seedlings that have made reputations for never missing a crop.

Two and three years ago the department at Washington sent me some buds and also some seedlings of some new Jujubes from central China. They are all bearing and are all different, one being round. The buds—four sorts bear fruit

fully two or three times as large as the old sort first introduced. Perhaps some day these will be planted in everybody's orchards. They are thornless, or nearly so.

PECANS

If I thought anyone would persist in pronouncing these *pea cans*, I would not write about them. (Reader please say *pe cons* with accent on last syllable).

The wild trees line the creeks and rivers of Central and West Texas. One can travel for five hundred miles up the Colorado River and never be out of sight of a pecan tree, and in places the groves spread out in the valleys until they are a mile or two miles wide. Choice new varieties are brought to notice each year. There are millions of trees and no two of them are alike. People now are fast getting in the notion of cutting the tops off of their trees (except a chance choice one) during the winter, and budding fine sorts on the new growth the next summer. They commence bearing the second year. I doubt if there is anywhere an investment so certain and inviting as the buying of some cheap land covered with native pecan trees, and then top working them.

Austin, Tex.

F. T. RAMSEY.

The season has been exceedingly dry in most parts of the Southwest.

The effect on the growth of stock has been to retard it considerably. Grades will be light as a rule.

Trade conditions are reasonably good. Feed and grain crops are light. The cotton crop is reasonably good and bringing good prices. We look for a very fair demand.

Peach and plum stock we think most in demand.

A new wholesale packing house on the railroad track is a recent improvement with us. No very extensive improvements are being made by nurserymen generally this year.

Nursery management is receiving a great deal of attention, and as business increases, more thorough system is required.

There are many new varieties of fruits, among others we will mention five varieties of peaches ripening after Elberta, introduced by J. W. Stubenrauch of Mexia, Texas.

Many old varieties have been discarded in this section, or rather have been replaced by new and better ones, the recital of which would take considerable space.

Sherman, Tex.

TEXAS NURSERY COMPANY.

Season opened up in February with fair amount of rain, with promise that drouth conditions existing the year before would be broken, but in this there was disappointment, as practically no more rain fell during the spring and early summer, with high temperature during May and June. Young stock such as cuttings and grafts, that was lined out suffered. On July 17, a good rain came that broke the drouth, and stock since then has made good growth. By constant cultivation much stock was saved that would have otherwise perished during the drouth in early summer. In August the rainfall was above normal, but so far there has been no rain in September. Will have to have rain before much digging can be done.

Retarded in early summer, plants made good growth since August, so that stock will grade up to average. Stock one year old last spring will be above average this fall, as it seems that stock already established did not suffer as did stock lined out in spring. Forest trees seemed to suffer more than anything else, that is, the natural timber 15 to 50 years old in the forests. Young shade tree blocks came thru allright. Good cultivation was the salvation.

In spite of the loss of the corn and oat crops in this part of the United States by drouth, trade conditions look fair at this writing.

Peach and grape for north and central Texas. Gulf Coast is now going to grapes pretty heavily. A few years ago figs and oranges were the leaders, and they will be planted heavily yet. In certain sections apples are in demand.

None added this year. We recently planted another vineyard to supply additional wood for making cuttings for grape nursery.

Armalaga, Ellen Scott, Bailey and Captivator grapes, Munson Free and Cling peaches, are all promising new varieties.

We have already discarded all unworthies. Catalog will show those we are not growing.

Denison, Tex.

T. V. MUNSON & SON.

We have had a queer season as to weather: plenty of rain in March and April, giving an ideal season for lining out; no rain in May and June, but just as we thought everything would die, it began raining in July, and during the month more than six inches fell, causing everything to put on an excellent growth.

Now that the growing season is nearly over, nursery stock will be up to an average, and much better than the two preceding years. But few peach seed came up, and such stock will be scarce another year. We look for an increased business in ornamentals. The agitation for parks and civic improvements generally has greatly stimulated the interest in such things. A marked improvement is noted in the demand for the better grades of stock.

The past three dry seasons have called attention to the necessity of planting the hardiest varieties and species.

Such shrubs as hydrangeas, snow-balls, and calycanthus have nearly all perished, and weigela, deutzias, forsythias, and kerrias have had a hard struggle to pull through. The old lilaes, philadelphus, cydonias, altheas, red buds, and spireas have lived and grown, but not flourished.

These seasons have brought into prominence many new or little known shrubs that have flourished, and some have even luxuriated in the intense heat and severe drouth which have prevailed at times. Foremost among these and about in the order named are the Parkinsonia aculeata, Poinciana Gilliesii, Russian olive, Vitex agnus-castus, all the Tamarix (some of which are beautiful, especially the Hispidula estivalis, Odesiana, and Japonica) the Robinias (among which there are some lovely new varieties) the Chilopsis, and erape myrtle.

We have gotten hold of a shrub that is new to us, and we have not yet been able to identify it. It is a shrubby salvia, very similar in flower to the splendens, is a continuous bloomer from May until frost. It is of neat compact habit, and has stood both zero weather and our extremely hot summers with equal indifference.

We shall be pleased to send THE NATIONAL NURSERYMAN or any of its readers a spray of it for identification, if interested.

Fort Worth, Tex.

BAKER BROS. CO.

A REMINDER OF EX-PRESIDENT ALBERTSON

Growing nursery stock in Colorado does not amount to much. The stock produced here is not enough to supply the demand within the state.

I can tell you about other things, I think of more interest to our nursery friends.

Two months this summer we were on the Pacific Coast. A fine time; no heat, no frost, no dust, (are you sure?—Ed.) no rain; sunshine all day every day. We spent a day with the Albertsons (formerly Bridgeport, Indiana), at Whittier, California, 17 miles from Los Angeles. He lives in one of the cleanest towns I ever saw; enjoys life and the folks about him are glad. Whittier is a Quaker town; no saloons, nary a bootlegger, nary a shack, nary a loafer. Well shaded streets, and beautiful parks to make you glad; one college, beautiful school buildings; shrubs and flowers at will; citizens who know how to spell and who love decency and order.

There I saw a fusehia which covered a good sized house; a geranium with a stem six inches through; a castor oil plant 40 feet tall; and it wasn't a very good day to see things either.

The Albertson's have the marks of prosperity all about them, the clean, modest, real kind. The day we spent with them did us good, they enjoy meeting old friends.

Delta, Col.

HERBERT CHASE.

THE FAR WEST

CONDITIONS FOR GROWTH QUITE FAVORABLE

The past summer, taking it all in all, has been rather favorable to the growth of nursery stock in the Willamette Valley. With the exception of a few days of very warm weather in July, we have had a very fine growing season. Rains began earlier than usual in the fall, but generally fine weather has prevailed the greater portion of the time.

The effect of these conditions on the growth of nursery stock has been such as to give us a uniform stand of nursery stock throughout this year. May say that we have never had a better outlook for good stock at this time.

Our sales, while probably not carrying as many large commercial orders as we have booked in the last two or three years, in the aggregate surpass the amount sold at this season last year.

The outlook for placing all of the first class merchantable stock at this time is very bright. Some lines, such as prunes, pears, almonds, and apricots, have been very brisk, and the visible supply of some of these stocks is now entirely exhausted. This would refer particularly to prunes.

Reviewing the trade over the Pacific Coast we are inclined to think that there is a tendency to reduce prices on apple stocks, and there probably will be a surplus of this class at the close of the season.

On the whole we think the nursery business on the Pacific Coast is in a very prosperous condition, and the demand for the home orchard is increasing every year.

When erecting our buildings two years ago, we did so on a large enough scale to take care of our business for some time to come, and as a consequence have not found it necessary to make any improvements during the past two years.

With splendid crops and high prices for all farm products on the Pacific Coast this year, we see no reason why the outlook should not be of the very brightest kind for the nursery-men.

Orengo, Ore.

OREGON NURSERY CO.

THE MOUNTAIN REGION

BREEZY CONDITIONS AND REMARKS

Characteristics of the season—Spring, dry and very windy. Summer, very dry, no rain at all. Fall, very dry, beginning to rain since the 15th of September.

Effect on growth of stock—Wind and dry weather in spring; result, heavy loss in seedlings and grafts, and retarded starting of dormant stock. Later, when irrigation began, stock that had not perished by drouth and wind had done well and made good growth. Drouth after June 1st has no terror for the irrigator. We will all harvest a lot of fine two year old Apple grafts and one year old buds in apple, cherry, pear, peach and apricots.

To the present time there has been no business in this country to speak of, good crops, fair prices, but everybody waiting; we do not know what for, neither do they.

Kind of stock most in demand—apple, pear and prune only, if there is a demand for anything. Improvements in your field or storage equipment or enlargement of your business."

New Brown's Rochester Nursery Spray Cart broke down before we got it to the field. Still out of commission.

Hints on nursery management—A little like the late Grover Cleveland's "Resumption." "The way to resume is to resume."

The way to manage a nursery is to manage it, and one fellow can't tell the other fellow how to do it.

New varieties of promise—Mr. Burbank's Formosa Plum, Standard Prune Himalaya; Blackberry, and Early Elberta Peach

Old varieties to be discarded—Most of them, save perhaps: 30 varieties of apple; 5 of pear; 12 of plum; 5 of prune; 12 of cherry; 12 of peach; 3 of apricot; $\frac{5}{8}$ doz. each small fruit, except grapes

Roy, Utah.

P. A. Dix.

FALL VERSUS SPRING PLANTING OF FRUIT TREES

Results of Careful Experiments. Difference of Opinion

Dr. J. C. Whitten, University of Missouri

There is hardly a month in the year which someone, some where, has not suggested as a good time for transplanting trees. The general concensus of opinion, however, is that deciduous fruit trees ought to be transplanted during their normal dormant period, either in spring or fall. As to which is better, fall planting or spring planting, there is quite a difference of opinion. Some growers advocate fall planting, others advocate spring planting; some say either time is good. While horticultural literature abounds with frequently expressed opinions as to the best time for transplanting, one finds comparatively little data in support of opinion in the matter.

In recent years observations have been made at the Experiment Station at Columbia, Missouri, upon the resulting behavior of fall planted and spring planted trees. Data showing the actual growth made by apple trees planted in the fall, as compared with those planted in the spring has, for the past two seasons, been recorded. It is not assumed that these two years' observations on a single species of trees in a single soil formation and climate can prove whether fall planting or spring planting under all conditions is better. A tabulated statement of results observed, however, should be of interest.

RECORD OF EXPERIMENTS

In order that the spring planted and fall planted trees might be so handled as to eliminate so far as possible from consideration any other factor than the time of year when they were planted, some precautions were taken. All apple trees studied were two years old when transplanted. They were grown in an experimental nursery on the horticultural grounds, where conditions of growth from the graft up to the time of transplanting would be similar. For purposes of measurement, as shown below, 10 apple trees were selected from this nursery to be transplanted in the fall, and 10 more to be transplanted the following spring. In each case the trees were selected in pairs, two trees being found which were as near alike as possible in size, vigor, habit, branching system, etc. One was marked Tree No. 1 for fall planting; the other, tree No. 1 for spring planting. In a similar way, trees as near alike as possible were marked as No. 2 for fall planting, and No. 2 for spring planting, and so on. One of each pair of these selected trees was set November 12, 1908, after their leaves had mostly fallen and the trees were well ripened for winter. At the same time that they were taken up and transplanted, the remaining leaves were also stripped from the limbs of the similar trees which were to be transplanted in spring. The branches also of the 10 trees reserved for spring planting were pruned back as near as possible to correspond with those pruned back for transplanting in autumn, so that leaf shedding, pruning branches, etc., would be done for all the trees on the same day. The 10 autumn planted trees

were numbered in a row and place was reserved in a similar adjacent row to receive the corresponding 10 trees the following spring.

The following table shows the amount of growth made during the summer of 1909 by these spring planted and autumn planted lots of trees.

COMPARATIVE GROWTH DURING SUMMER OF 1909 OF JONATHAN APPLE TREES ON THE EXPERIMENT STATION GROUNDS, COLUMBIA, MO.

10 Trees set in autumn, Nov. 12, '08.			10 Trees set it Spring, April 22, '09.		
Tree No.	Total length growth of limbs.	Caliper.	Tree No.	Total length growth of limbs.	Caliper.
1	247. in.	3/4 in.	1	170.7 in.	11/16 in.
2	375.5 "	3/4 "	2	185. "	3/4 "
3	324. "	3/4 "	3	99.5 "	5/8 "
4	16. "	15/16 "	4	42. "	5/8 "
5	260. "	3/4 "	5	133. "	9/16 "
6	411.5 "	13/16 "	6	105. "	9/16 "
7	195. "	13/16 "	7	173.5 "	15/16 "
8	210. "	13/16 "	8	190.5 "	11/16 "
9	104. "	3/4 "	9	21. "	5/8 "
10	29+. "	15/16 "	10	124. "	3/4 "
Avg.	243.7 "	13/16 "	Avg.	124. "	5/8 "

At the close of the first season's growth of these trees, it will be seen, the average total length growth of all the new limbs on the autumn planted trees, was almost double that made on trees transplanted in spring. The caliper or diameter growth of stem was taken about six inches above ground, so as to eliminate any irregularities which might possibly be due to the spreading of the stem near the root system. There was a gain in diameter for the autumn-transplanted trees of about 30 per cent. While to the casual observer three-sixteenths of an inch difference in diameter might not be significant, it will be significant to the experienced nurseryman who realizes that even a very small gain in diameter, growth or stockiness of the tree is a very important factor in securing a good tree.

FALL PLANTING BEST

In comparing the pairs of trees, it will be observed that in only one instance did a spring planted tree out-grow its mate which was planted in the fall. Inasmuch, however, as some of the trees in each transplanting made much larger growth than did others, it may readily be understood that accidental variation might be responsible for this spring-planted tree out-growing its autumn-set mate. The second year, the total length growth of limbs of the fall planted trees was eighty and one-fourth inches and the total length growth of the spring transplanted trees was sixty-three and five-twelfths inches. It should be added that in the course of each season's growth both rows of trees were pruned back just as we would

shape them for ordinary orchard purposes. Naturally, at the close of the first summer's growth, a larger percentage of new growth would be removed from the autumn-planted trees because their limbs were longer. The difference in the amount of length, growth and diameter of these autumn and spring-transplanted trees was not the most significant point observed, in the comparative studies of the two groups.

In addition to these 20 trees, a large number were planted in autumn and a corresponding number in spring to be dug at different times for the purpose of root study and other observations. It was noticeable that new root growth began to form very quickly on the trees planted in autumn. Callus formed abundantly wherever a large root was cut back in transplanting in the autumn. The wounds began healing quickly wherever a branch was cut off close to the main stem, even tho the pruning was done as late as November. This autumn formation of new tissue about the wound, callus of the cut back roots and the abundant new root growth indicated that at the time of transplanting in autumn the plant food materials stored within the tree were in a condition to be transported to and utilized at points where it was needed for growth. It is probable that after trees have come into more permanent winter conditions the stored food compounds within reach a more stable form, in which they are less soluble and are less capable of being carried to any part of the tree for healing use or for storage. In other words, in the autumn-transplanted trees growth was going on; but it was the growth of healing and storage where needed, and there was no visible pushing of the buds or growing tips, the trees remaining dormant. This abundant autumn root growth continued until very cold weather in December. Some trees were taken up even after the ground began to freeze on top and there were evidences that tender new root growth was still continuing. Apparently, root growth on autumn-transplanted trees does not cease until the ground freezes deep enough for the frost to reach any growing root in question.

FALL PLANTING FAVORS ROOT-GROWTH

Comparing the root-growth made on these autumn transplanted trees with observation made on the same days on untransplanted trees remaining in the nursery, it is evident that the transplanted trees were even making more rapid progress in healing root wounds and in putting out new roots than were the trees in the nursery which had not been transplanted. Apparently the untransplanted trees in the nursery do not continue root growth to the same degree that root growth will progress on the trees, provided they are transplanted in the autumn. In other words, it seems to me that the tree is capable of responding to the call for quick establishment of new root system when it is transplanted in the fall, and that available plant food being stored and carried over in this stable condition is partly used in the autumn to meet this demand for new root system or for the healing of wounds.

Observations made on spring transplanted trees showed that they do not quickly begin to make new roots in spring. They were out in full leaf and apparently making good progress above ground before any root growth could be detected below ground. It seemed as if available stored food in the trees was carried to the growing points above ground

and utilized to make new growth there more readily than it was carried to the wounds of the roots to make calluses or to make new roots. Root growth did not begin in spring transplanted trees until the soil had gotten quite warm somewhat late in the season. In fact, root growth below ground did not begin to form abundantly until June, about two months after the trees had been transplanted in the spring. Pairs of trees taken up each month during the summer showed those transplanted in the autumn had much larger root growth than those transplanted in the spring.

It is a well known fact that our soil is warmer in the autumn than it is in the spring, even though atmospheric temperature may be the same. The greatest sum total of heat stored in the soil does not occur during the hottest part of summer, but somewhat late in autumn after the atmosphere begins to cool off. The surface of the soil is warmed in hot weather. It continues to warm up to greater and greater depth as the season progresses. At a given distance below the surface in any soil formation, we reach a point where the soil is no longer affected by this summer warming. In other words, at no great depth below the surface we reach a layer where we have a constant temperature summer and winter. This storage of heat reaches its greatest depth in autumn. This heat is given off during autumn and winter. It seems possible that the release of this enormous quantity of heat stored in the soil may furnish conditions to the autumn transplanted trees almost akin to mild bottom heat in hot beds. Spring-transplanted trees have no such warmed layer of soil beneath, as the soil has lost its store of heat. In connection with this suggestion it is of interest to note that toward the South, especially where summers are long and hot, cuttings put in in the open in autumn root much more readily than they do in the north when put in either autumn or spring. Some species which do not root readily from cutting at any season of the year in the North may root readily from autumn made cuttings in the South. Cuttings from pear orchards in Texas and inserted in the fall readily make well rooted trees while as far north as Missouri it is difficult to root pears from cuttings at all. Even the persimmon, one of the most difficult of trees to propagate by means of cuttings in Missouri, will root quite readily from autumn made cuttings in Texas or the Gulf region.

Observations on other trees than those whose measurements are recorded above lead the writer to believe that apples, pears, hardy plums and cherries generally do better in Missouri if transplanted in autumn than they do when transplanted in the spring. Peach trees and some tender or only half-hardy ornamentals seem safer when transplanted in the spring. If an autumn-transplanted tree does not make a root system before cold weather comes on, it will not be in a condition to as well withstand winter killing during the winter as if it remained in the nursery with the entire root system intact. For that reason it seems wise, where autumn planting is to be done, to plant as early in autumn as is feasible; that is, as soon as the leaves can be stripped safely from the trees. Caution should be added, however, against stripping the leaves in autumn too early, as this is undoubtedly injurious. Leaves should not be stripped off until they show a tendency to begin to come readily from the trees. It seems

to the writer that the farther south we go, the more is autumn transplanting to be recommended, while farther toward the North, where the autumn leaps quickly into winter and where the severe winters make winter-killing likely, it will be safer to transplant in spring unless the work can be done early in autumn, so there will be time for the trees to get established before cold winter comes on. It also appears that the hardier the tree, the safer it is to transplant in autumn, while the tenderer, more liable to winter injury, the greater the corresponding advantage of transplanting in spring.

The condition of the soil also is a factor. If excessive autumn drought prevails, it may not be possible to get the

soil in condition for autumn transplanting. A tree transplanted into a perfectly dry, baked soil may not get moisture enough to develop or become established in autumn and as a result it may dry out. In such a case, it is probably better to wait until spring when the soil will have received its winter and spring moisture. Another factor of importance is that where one has choice between fall and spring planting, he can double the period over which the work can be done. There is usually a rush of work in the spring. If the spring is early so the trees come quickly into leaf, there is little time for spring planting.

ROOT GALL

Report of Chairman E. A. Smith

[This is the first year there has been a committee appointed whose business relates entirely to investigating and reporting upon Root and Crown Gall]

IMPORTANT BULLETIN

Soon after the American Association of Nurserymen met at Denver last year, by far one of the most important publications on the subject of root gall that has appeared was published by Geo. G. Hedgcock, of the Bureau of Plant Industry at Washington. The bulletin, known as No. 186, contains experiments and data of importance covering a period of several years. We understand this bulletin can still be had upon application to the Bureau of Plant Industry. Professor Hedgcock's experiments have been continued by Dr. Erwin F. Smith, Pathologist.

The drift of opinion in the above reports seems to be that root and crown gall are injurious, but to what extent has not yet been determined, as the results of many of the experiments are contradictory and still involved in doubt. Only time can settle this problem. It is gratifying to know that a number of practical nurserymen in different states have recently set out trees affected with crown gall for experimental purposes, and will report upon the same from time to time.

COMMITTEES

Sub-committees were appointed in some eighteen states, extending over a widely scattered area. Several members of this committee have already reported experiments, which we are confident will be of value as time goes on.

We take this opportunity of thanking the members of this committee for their ready response and willingness to render assistance. The committee in the state of Montana has secured a modification of the horticultural law in that state, and considerable progress has been made in changing the attitude of inspectors in various states as to the effect of root and crown gall, especially of the hard form upon apple trees.

TEST CASE

A pronounced case of injustice, as it appears from the information at hand, is that of the destruction of a large number of apple trees shipped into Colorado by W. C. Reed

of Indiana. As a detailed account of this case has been forwarded to a number of members of this Association, we deem it of sufficient importance to warrant our making special mention of it at this time. The writer would recommend that the Association, thru its legislative committee, render financial assistance in making this a test case, and endeavor to ascertain whether the law is constitutional or not which permits the destruction of healthy trees.

PRACTICAL EQUIPMENTS

The writer believes it is only thru practical experiments that the existing prejudice against apple trees affected with root or crown gall can be overcome, and I would suggest and urge that nurserymen set aside ground for experimental purposes and that reports be made upon the results of such experiments from year to year; also that a permanent committee be appointed by the Association to report upon this work.

In regard to our own experiments in the state of Minnesota, will say that trees which were planted by the roadside, six years ago, which were then affected with root gall, came thru the winter in splendid condition. The trees are now three and one-half inches in diameter and loaded with fruit. Other trees have also been set out by us for further experiments. In the spring of 1910, some of our red raspberries were found to have root gall upon them. As soon as we discovered this fact, we proceeded to dig up the entire block of plants. In digging as nurserymen well know, pieces of the roots will be left in the ground. To our surprise, these root-lets threw up sprouts early, which developed into A-1 plants, free from any trace whatever of root gall. In the fall we dug and used them to fill our orders as they were fine plants in every respect. If root gall is contagious, why did not these young plants have root gall upon them, being grown from pieces of roots from plants which were badly affected with root gall?

According to certain pathological reports, apple trees affected with root or crown gall planted 24 feet apart infect the soil with gall and contagion results; but root gall upon raspberries planted two feet apart in the same row, in the above experiment, did not communicate itself to young plants, or sprouts grown from the same root. The theory of soil inoculation is a doubtful one at best. Practical experiments sometimes disturb and set at naught theories which have not been fully demonstrated or tested.

CONCLUSION

Formerly the cry was, "The Philistines are upon us," but today we nurserymen may say, "The bacteriologists are upon us." They experiment with and inoculate trees, and because they find contagion thru this process, they condemn whole shipments of nursery stock; but nurserymen are not adopting the practice of inoculating trees prior to shipment, therefore much of this contagion scare should not apply to them or their product. Certain diseases of the human system can be communicated by inoculation, but if the inoculation does not occur, there will be no contagion. So it is in a large degree with such tree diseases as the hard and hairy forms of root or crown gall.

The writer is in receipt of a letter from the Pathologist in charge at Washington, dated May 8th, 1911, addressed to the Superintendent of Horticulture in one of the western states. We quote from the letter as follows:

"While I am in sympathy with the effort of keeping newly planted apple orchards free from diseases, the present scare in regard to crown gall is probably unnecessary. It is a very slow thing as a rule, and has been in the older eastern orchards for years. Oftentimes old galls are found on successful bearing trees forty years of age."

Respectfully submitted,
E. A. SMITH,
Chairman Root Gall Committee.

PRESIDENT STARK'S CONVENTION ADDRESS CONCLUDED

HIGHER STANDARDS OF QUALITY

The world moves and we are all carried along with it—except those who do not do a little moving themselves and they are continually dropping away. The history of the nursery business, as well as that of practically every other industry, had been that of an upward and onward movement, of progress, development and ever striving toward higher ideals. The improvement in grades in the past twenty-five years is but a beginning; it is in the improvement of the trees themselves that the real start must be made. Trees are our product, and to improve them calls not only for a thorough knowledge of the best soils adapted to the growth of each kind of stock, but a working knowledge at least of fertilizers, entomology and spraying. The commercial spirit of economy demands that only those lands be used which are best adapted to the propagation of each kind of stock. More space must be given to each tree, only those stocks employed which are best adapted to the purpose for which they are used, and more individual attention given to each tree, plant or vine.

More care should be used in the selection and cutting of buds and scions and in propagating from improved strains, as well as selected trees which have shown a marked superiority over others of the same variety growing under equal conditions. Then when digging time comes, we should use every precaution to prevent any damage or lowering of the vitality by exposure. Nurserymen lose more than they realize here; for the damage is not conspicuous and often not noticeable, yet when a tree, low in vitality, fails to make a proper growth, a complaint is registered and the nurseryman suffers. After all the trees are dug it is usually necessary to throw out a large per cent which do not come up to the necessary requirements. The standard for our trees should be like that of an orange packer in the South, who had tacked this legend over the tables, "Every Doubtful Orange is a Cull."

Our responsibility does not cease with growing and grading, but extends to the packing. The best materials consistent with proper economy should be used and no unnecessary risks taken. We have not only the value of the stock at stake, but the good will, success and future patronage of the customer as well. We can also help in other ways such as adjusting overcharges, preventing delays, doing the right thing at the right time—in other words by applying to our every-day business what is known as the "personal touch."

There are better methods of selling and distributing to be worked out. The nation is undergoing an industrial metamorphosis, as different from those of the past as the beautiful butterfly is different from the odious caterpillar. Higher prices are forcing the elimination of unnecessary costs in production and distribution. Circumstances demand that we devise new ways and methods, and as the selling cost has always been such a large per cent of the whole, it needs must be one of the first to yield to this pressure of the times, which is bearing heavier each season on the cost of production. I say there is a way, and it has already been pointed out, indicated by large pioneer businesses in other lines. Just how closely we will follow the trail blazed by these pioneers remains to be seen. This preachment, or if you refer, plea for higher ideals, which none have reached in the past and few, if any, of those present will ever attain in the future, would be worse than futile if it were merely a statement of what one individual thinks should be done.

I have endeavored to call attention to a condition which we recognize and to especially emphasize it, because we become so familiar with what we see every day that we fail to realize the ultimate outcome, or at least fail to appreciate our opportunities.

I consider what has been accomplished in horticulture in the past and yet this wonderful development was the result of work of good men, who were poorly equipped in every way. The result of the improvements of the past few years will not be felt for some seasons to come; for in horticulture the work done one spring does not bear fruit the same season nor the next.

The opportunity is here but to grasp it, to rise and meet it, the nurserymen must develop fraternal interest, and strive to elevate their business standards to a closer working harmony, as well as to develop a more binding social spirit.

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TARIFF—Irving Rouse, Rochester, N. Y.
LEGISLATION EAST OF MISSISSIPPI RIVER—Wm. Pitkin, Rochester, N. Y.
LEGISLATION WEST OF MISSISSIPPI RIVER—Peter Youngers, Geneva, Nebr.
CO-OPERATION WITH ENTOMOLOGISTS—L. A. Berckmans, Augusta, Ga.
PROGRAM—C. J. Maloy, Rochester, N. Y.
EXHIBITS—A. E. Robinson, Bedford, Mass.
ARRANGEMENTS—John Hall, Rochester, N. Y.; W. H. Wyman, North Abington, Mass.; H. P. Kelsey, Salem, Mass.
ENTERTAINMENT—J. Woodward Manning, North Wilmington, Mass.
PUBLICITY AND TRADE OPPORTUNITIES—W. P. Stark, Louisiana, Mo.; Jefferson Thomas, Harrisburg, Pa.; Orlando Harrison, Berlin, Md.; C. M. Griffing, Jacksonville, Fla.; G. C. Roeding, Fresno, Cal.; H. D. Simpson, Vincennes, Ind.
ROOT-GALL—E. A. Smith, Lake City, Minn.

STATE AND DISTRICT ASSOCIATIONS.

American Nurserymen's Protective Association—President, J. W. Hill, Des Moines, Ia.; secretary, Thomas B. Meehan, Dreshertown, Pa. Meets annually in June.
American Retail Nurserymen's Protective Association—President, Charles J. Brown, Rochester, N. Y.; secretary, Guy A. Bryant, Princeton, Ill. Meets annually in June.
Association of Oklahoma Nurserymen—President, J. A. Lopeman, Enid, Oklahoma; secretary, C. E. Garee, Noble, Oklahoma.
Canadian Association of Nurserymen—President, E. D. Smith, Winona; secretary, C. C. R. Morden, Niagara Falls, Ont.
Connecticut Nurserymen's Association—President, Paul M. Hubbard, Bristol, Conn.; Secretary, C. H. Sierrman, Hartford, Conn.
Eastern Association of Nurserymen—President, Wm. Pitkin, Rochester, N. Y.; secretary-treasurer, William Pitkin, Rochester, N. Y. Meets annually in January.
National Association of Retail Nurserymen—President, E. S. Osborne, Rochester, N. Y.; secretary, F. E. Grover, Rochester, N. Y.
National Nurserymen's Association of Ohio—President, J. W. McNary, Dayton O.; secretary, W. B. Cole, Painesville, O.
Pacific Coast Association of Nurserymen—President, P. A. Dix, Roy, Utah; secretary-treasurer, C. F. Tonneson, Tacoma, Wash. Meets annually in June.
Pennsylvania Nurserymen's Association—President, Samuel C. Moon, Pa.; secretary, Earl Peters, Mt. Holy Springs, Pa.
Southern Nurserymen's Association—President, W. A. Easterly, Cleveland, Tenn.; secretary-treasurer, A. I. Smith, Knoxville, Tenn.
Tennessee Nurserymen's Association—President A. I. Smith, Knoxville, Tenn.; secretary, G. M. Bentley, Knoxville, Tenn.
Texas Nurserymen's Association—President, J. R. Mayhew, Waxahachie, Texas; secretary-treasurer, John S. Kerr, Sherman, Texas.
Western Association of Nurserymen—President, Geo. A. Marshall, Arlington, Nebr.; secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets annually second Wednesday in December.

ANNUAL REPORT OF THE OFFICE OF EXPERIMENT STATIONS

This comprehensive volume contains 512 pages, making it larger by nearly one hundred pages than the similar publication of the previous year, 1909. Taking these figures as an indication of the increase in the work of the experiment stations the country over, what an immense factor these institutions are becoming in the agricultural investigational work of our United States! Do we all realize to what an extent the results of the station work can help each one of us in our own work, if we are but willing to note what is being done, and willing to profit by the findings of those who are better equipped than the busy nurseryman to carry out experiments, some of them covering a dozen years, with tree and plant growth? To be sure, the results found in one state are not necessarily applicable to conditions a thousand miles distant; but, at least, we should peruse with particular attention the bulletins bearing on our line of work that are issued by our own state experiment station. Besides these, not a week passes but bulletins of country-wide value are issued by the various bureaus of the U. S. Department of Agriculture at Washington, which the up-to-date farmer, orchardist, and nurseryman cannot afford to overlook. Will anyone insist on clinging to the old method when the corn yield can be increased sixteen and one-half bushels per acre by adopting a system discovered by the experiment station, as was done in Missouri? The fruit-breeding experiments carried on so extensively in many states, for the purpose of obtaining hardy or drought-resistant varieties, are bound to be of vast importance to the man who deals in trees, be he orchardist or nurseryman.

A glance through the Annual Report for 1910 will surprise one who has not kept informed of the work that is being done. First, the different lines of investigation are briefly considered, and a review of the year is given. Then comes a careful account of the work of each station. It is interesting to note what lines of work are under study in many different states, and again to see what varied experiments are required by the differing conditions in widely separated states. Following some forty pages of statistics of the colleges and stations, come discussions and summaries of different lines of work. The volume is illustrated with a large number of views on experiment station grounds, and cuts showing the results of several experiments.

VAGARIES OF INSPECTORS

The following remarks are not instigated by any desire on our part to take a fall out of the local tree inspector, but so many instances of erratic and unjustifiable decisions have come to our attention recently that we are very much disposed to call attention to some peculiar decisions for the educational value of the record.

In a recent Washington case, an overly active inspector refused a certificate of inspection because he was suspicious that the trees were not true to name. He *suspected* the presence of seedlings among those bearing the labels of named varieties. He threw out four boxes after making a cursory examination of one. This is certainly taking much for granted, and drawing a long bow.

Another state which handles shipments in an exceedingly arbitrary and sometimes apparently unfair manner is California. An instance is given by a western nurseryman where a carload of peaches was shipped into the San Joaquin Valley, C. O. D. The buyer accepted the consignment as satisfactory, but soon afterwards telegraphed that the trees were ordered destroyed by the inspector. The shipper happened to be in the state, and was able to reach the car before the order was executed, and with one of the head inspectors went over the whole stock. He discovered less than half a dozen trees which would not pass inspection. The car lot was not destroyed. It afterwards transpired that this destructive inspector was in collusion with a local nurseryman, whose interests he evidently had very much at heart.

Another case which happened only last spring is indeed curious. A carload shipped by one of the leading firms of the Middle West was promptly destroyed by the inspector. His explanation was that "he was afraid of yellows, rosette, and brown tail moth." More than that, he claimed the trees were dead, being frosted in transit, and so he "put them out of the way."

A subsequent report by the foreman of the company to whom they were shipped stated that he could see nothing wrong with them, and furthermore that of a few of the apple trees which he surreptitiously took from the car and planted "everyone grew." These instances seem to express wholesale disregard for the rights of the shipper and a type of brigandish action which no state or country should for a moment permit. Cases of this kind should be given wide publicity, and followed up very closely.

ACRES OF FLOWERS

California has always been known as the land of sunshine, fruit, and flowers. At the Panama-California International Exposition to be held in 1915, at San Diego, the claim of the State to preeminence in these lines will be demonstrated. The directors of the Exposition have determined on a vast scale of floral and horticultural decoration which will be a surprise and a delight to the average visitor. It was found that to secure the plants required for this scheme would require a canvas of the entire country and even then that it would hardly be possible to secure the quantity needed by the plans as formulated. Director-General D. C. Collier, was not willing to abandon the plans which had fascinated the board of directors and he thought out a way to meet the difficulty. It was to use as much of Balboa Park, where the Exposition is to be held, as might be needed—all of its 1,400 acres if they should be required—for a city farm and nursery, wherein the Exposition could propagate the plants it would require. The city officials adopted the idea enthusiastically, and 30 acres were at once prepared for a nursery, and two commercial nurseries were bought outright as a starter. Citizens donated cuttings, and for weeks 100 men were kept busy carrying these to the park and setting them out. Geraniums, roses and poppies have been planted by the million, and all kinds of trees and ornamental shrubs have been set out in large numbers. The Exposition is four years away, but the floral display is to be on a grand scale and the preparations were begun none too soon to make it a success.

Exhibitions

DAHLIAS AT WHITE MARSH, MARYLAND

The annual dahlia show held by the Richard Vincent, Jr., & Sons Company at White Marsh, Maryland, is coming to be looked forward to each year as a great opportunity to feast the eye on dahlia blooms of every color and variety in all their loveliness. Just at the height of the dahlia season, this firm for five years has thrown its houses and its fields open to all who wished to visit them. While there were this year exhibitions of garden and farm products, and fifteen acres of cannas could be seen, these seemed unimportant in comparison; for the dahlia fields cover forty acres, a larger space than is given up to the cultivation of this flower anywhere else in the vicinity. Many blooms had been cut and arranged in the buildings with an eye to color effect. As was predicted by Mr. Vincent, the dahlias were better this year than ever before, although weather conditions early in the season did not seem entirely favorable. Mr. Richard Vincent, Jr., has recently been elected president of the Society of American Florists.

COST OF THE SPOKANE APPLE SHOWS

The progressiveness and advertising activity of the people of Spokane is well demonstrated by the figures recently published, giving the cost of the apple shows which have been held in Spokane since 1908 to the people of that city:

The first show in 1908 cost the people of Spokane about \$40,000, the organizers facing a deficit of \$3,500 after the last prize had been paid. This was met by 100 business men, each contributing \$35. The second show, in 1909, cost more than \$45,000, and the two expositions in 1910, one in Spokane and the other in Chicago, cost in the neighborhood of \$88,000. The show next November, with its accompanying carnival and festivals, means an expenditure of more than \$60,000, every penny of which will be provided in contributions from the people of Spokane.

The fourth national apple show will be held in Spokane, November 23-30, inclusive. An interesting feature of the fourth show will be a competition between manufacturers of spray machinery. This competition is designed to bring out the most efficient apparatus for distributing insecticides and fungicides that there is on the market at the present time.

AMERICAN APPLE EXPOSITION

Denver will be the great center of interest to growers of apples during the week of November 12-18. The American Apple Exposition and Carnival is the designation by which the show to be held at that time is known. This may in a way be said to be an outgrowth both of the Colorado National Apple Exposition early in 1910, and of the Spokane National Apple Shows. The exposition at Denver this year does not take the place of the Spokane National Apple Show, for that is held also; but the three shows already held in Spokane must necessarily have helped foster enthusiasm for the event at Denver.

Here it is particularly desired to attract exhibits from all parts of the country, and partly to assist in carrying out this idea, the car lot exhibit has been done away with, it being

impracticable for those living at a distance to send so large a quantity of fruit. However, the prize of \$175 for a 25-box exhibit means a larger amount per box than the \$1000 previously offered for a car lot exhibit. The partial premium list published in September contains seventeen divisions, covering box, barrel, and plate exhibits, by-products, and also the largest and best display by any state (Colorado not competing), and the best barrel or three boxes from any foreign country.

AMERICAN LAND AND DRAINAGE EXPOSITION

This Exposition will be in progress when subscribers receive this issue of THE NATIONAL NURSERYMAN. Among the prizes are several of \$1000 each for different grain and vegetable crops, and one of \$500 "for the best 25 boxes of apples of any variety or varieties, grown anywhere in the world."

FRUIT AND FLOWER SHOWS OF FALL AND EARLY WINTER

At which of these exhibitions are you going to make entries?

American Apple Congress, Denver, Col., Nov. 12-18.

Fourth National Apple Show, Spokane, Wash., Nov. 23-30.

National Horticultural Congress, St. Joseph, Mo., Nov. 23-Dec. 2.

Maryland-Virginia Apple Show, Washington, D. C., Nov. 27-Dec. 2.

Illinois State Horticultural Society, Champaign-Urbana, Dec. 11-16.

American Carnation Society and American Rose Society, Detroit, Mich., Jan. 10-12, 1912.

Missouri State Horticultural Society, Columbia, Jan. 9-12, 1912.

Quiz Column

CRACKING PEACH PITS

Ed. NATIONAL NURSERYMAN:

Sir: This is a year when peach seed is scarce and high. I am told that many more trees can be had per bushel of seed when kernels are cracked out and planted in the spring than by planting the seed in fall in the usual way. Being inexperienced, I come to you. Will you please state if the above is correct, and how many more trees per bushel may be expected by cracking out the kernels? In other words, will it pay for the trouble?

Julian, N. C.

W. T. HANNER.

We always plant peach pits uncracked with good success. Berlin, Md.

J. G. HARRISON & SONS.

If the peach pits are good, sound stock, not over one year old, we would recommend planting without cracking; or bed the pits in light sandy soil this fall, and pick the seed out in the spring. We handle them in both ways and have had satisfactory results.

Baltimore, Md.

FRANKLIN DAVIS NURSERY CO.

In regard to planting cracked peach pits in North Carolina, we will state that we never do this. We simply put the seed out in the ground in the row where they are to grow, in September or October, and there is never any trouble about their coming up.

Some nurserymen in the North, we understand, stratify their seed, but we have never found this even necessary here.

Pomona, N. C.

J. VAN LINDLEY NURSERY CO.

Cracking peach seed is an expensive, and as we have found it, unprofitable business—especially in view of the fact that seed planted at any time now, up to Nov. 15th, in this section, ought to germinate and produce a good stand of seedlings next spring.

We prepare the land, subsoiling and thoroughly pulverizing, then lay off the rows, put in the fertilizer, and drop the seed, we prefer to do it by hand, cover very lightly for two or three weeks, and then cover to a depth of four inches. A great deal depends upon the seed, if they are all right, this ought to give a good stand. There is a certain protection to the kernel, as it lies in the ground, in the loose sheath of the seed, after it has burst. We tried cracking seed once and don't think we got over five per cent. of a stand.

Winchester, Tenn. THE CUMBERLAND NURSERIES.

[We shall be glad to know the practice and experiences of others in planting peach pits. Is it not largely a question of locality?—Ed.]

WISTARIA

Ed. NATIONAL NURSERYMAN:

Sir: If you can, kindly let me know the following regarding Wistarias:

What other name is the Sinensis Wistaria known by?

What other name is the Chinese Purple Wistaria known by?

What other name is the Magnifica Wistaria known by?

Are the above named varieties distinct from each other?

Which of the above named Wistarias has the densest foliage and which next?

Which of the above named Wistarias is the hardiest and which next?

Which of the above named Wistarias makes the best growth in a season, and which next?

Kansas City, Mo.

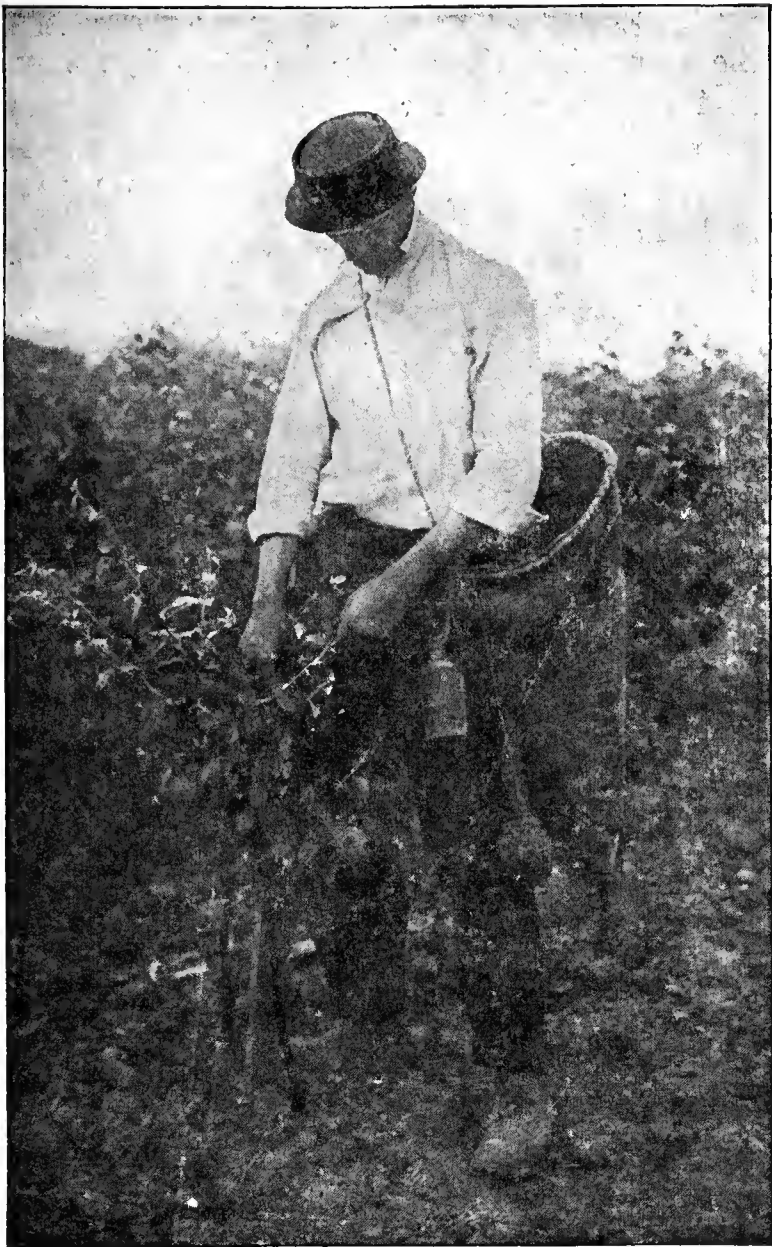
C. MEYGUND.

So far as I can, I am answering the questions you have asked. Wistaria Chinensis is also W. Sinensis, or Sweet Wistaria, or Chinese Wistaria. This is the parent of a number of varieties, white-flowered, Alba flora, double-flowered, Alba plena, and a variegated form, Variegata. The name purple wistaria is often applied to the Chinese form. Wistaria magnifica is a variety of Wistaria speciosa, which is the American wistaria, or kidney bean tree. This is quite distinct from the other forms. It is later in blooming than Chinensis, and it is not as vigorous in habit of growth. Chinensis is the largest and most vigorous of the group, and the fastest grower. On the whole, the Chinensis is also the hardiest, although northern forms of the American wistaria are fairly hardy. It reaches Kansas and Virginia on the north. There are only four well known species of wistaria, though each of these has given a number of varieties.

EDITOR.

USE THE QUIZ COLUMN

The Quiz Column is freely open to all patrons of the NATIONAL NURSERYMAN. They are invited to make the fullest use of it. We can get the information, if we cannot furnish it first hand.



Cutting blight from nursery stock. Note the bag into which the blight shoots are put, the bottle of corrosive sublimate, and the sponge at the end of a string.



As a tree appeared after the pruning made necessary by one season of the unchecked ravages of pear blight in an old Bartlett pear tree.



Canker extending downward from cankered stub of previous season, cleaned out ready for disinfection and painting.



Cankers almost always appear about the base of blighted spurs or water-sprouts.

THE ABOVE ILLUSTRATIONS FROM CORNELL UNIVERSITY BULLETIN 272
ON FIRE BLIGHT OF PEARS AND APPLES

Our Book Table

FARM DEVELOPMENT, By Willet M. Hays. 5 x 8, 391 pages, including index. Illustrated. Published by the Orange Judd Co., New York. Price \$1.50.

Assistant Secretary Hays, formerly agriculturist in the Minnesota Experiment Station and College of Agriculture is not allowing the duties of his office to suppress the store of knowledge gained through many years of useful experience as a teacher and experimenter. Some of this is coming to the fore in book form. Not the least valuable contributions on agricultural education with special reference to farm practice is the work noted above. Most books which aim to teach agriculture take up the subject from the laboratory or pedagogic standpoint, and it is usually divided into three parts, the soil, the plant, the animal. Mr. Hays makes an important departure from this method in treating his subject, leaving out the animal and the plant as specific divisions altogether. In brief the method of treatment is as follows:

Having been prepared from notes used in giving a course in an agricultural high school, this book is written in such a way as to be perfectly comprehensible to the beginner, and is intended as an introduction, not as a complete treatise. It deals in an elementary way with many of the questions related to farming. A chapter of nearly a hundred pages is devoted to drainage, which is coming to be recognized as so important an agent in conserving soil moisture. Other subjects which are dealt with at length are the soil and soil formation, irrigation, roads and bridges, and fences; while short chapters are given on the geological history of the earth, the selection of a farm home, planning the farm, and subduing the land.

It is seen, then, that this book has special value for the man who takes up farming as a business and desires guidance at the outset, as well as for the teacher who has a class of students in elementary agriculture on his hands. We think that in the present state of development of agricultural pedagogics, the book possesses considerably more value to the practical farmer than to the student of the soil, the plant, and the animal; but in saying this, we do not wish to discount the value of the book to the teacher. It merely emphasizes its two-sided character.

Mr. Hays has presented an excellent volume, and we have much pleasure in recommending it to our readers.

AGRICULTURE THROUGH THE LABORATORY AND SCHOOL GARDEN, C. R. Jackson, Mrs. L. S. Daugherty. Orange, Judd Co. 5½" x 7½", 402 pages, illustrated. Price, \$1.50.

During the past four or five years a number of books aiming to assist the teaching of elementary agriculture in the common and graded schools have been published. This work is an addition to that type of text. It does not aim to meet the needs of any special grade of school. It is very comprehensive in character, covering soils and their physical and chemical sides, plant growth, milk and its care, with some specially good chapters on the improvement of plants, the pruning of plants, the enemies of plants and the ornamentation of school grounds. From the standpoint of balance, the book is not quite symmetrical, in that much more stress is laid

upon the plant than the animal. It contains, however, a good deal of suggestive matter, and from the pedagogic standpoint, is very well arranged. To all teachers who are interested in this phase of natural history, the book will be found to be of great service.

NEIGHBORHOOD ENTERTAINMENTS, Renee B. Stern. Published by Sturgis & Walton Company, New York. 5 x 7½ inches, 297 pages. Illustrated. Price, 75 cents net.

There can be no doubt to those who will give the matter thought that there is a real call for such a book as this. One reason why so many young people leave the farms for the cities is that they can find there so much more entertaining occupation for their spare hours. But if the farmers' sons and daughters of today leave their country homes, who will direct the farms tomorrow? Conditions should not be such that the man or woman, young or old, on the farm should be either tempted or forced to live in such an isolated way as to almost forget that the people round about, with whom occasional business transactions of one sort or another are carried on, may be approached in another way; for it is only natural, and therefore desirable, that there should be companionable association with those outside of one's own family. The book at hand discusses the question of various clubs which may be made valuable in promoting community activity, and also deals with many kinds of entertainments which are of a purely social nature.

SOME OF THE RECENT BULLETINS

CLIMATIC ADAPTATION OF APPLE VARIETIES, J. K. Shaw (from 23d Annual Rpt. Mass. Agr. Exp. Sta.).

This is the result of four years' study "of the effect of varying climatic conditions on varieties." A map is given, showing apple belts of the country, and a few varieties, which were studied especially, are discussed as regards distribution and characteristics.

THE COLORADO RASPBERRY INDUSTRY, R. S. Herrick and E. R. Bennett (Bul. 171 Col. Agr. Exp. Sta.).

According to this publication, the yield and quality of this fruit is at least equal in Colorado to that in the East. The dry climate largely prevents attack from disease.

THINNING THE WINESAP, AND WINTER AND FROST INJURIES OF FRUIT TREES, R. S. Herrick (Bul. 170 Col. Agr. Exp. Sta.).

While the Winesap does not ordinarily attain very large size, it has been found that by thinning, even as late as July 20, both size and color have been much improved. The second part of this publication discusses winter injury of young and old trees, and spring frost injuries, and notes the fact that every orchardist interviewed on the subject has found the orchard heater a good investment.

A STUDY OF THE IMPROVEMENT OF CITRUS FRUITS THROUGH BUD SELECTION, A. D. Shamel (Circ. No. 77 Bur. of Plant Industry).

In this circular, the objects and early results of this study, but recently undertaken, are stated. Much variation has been found in the bearing records of different trees of the same variety under similar conditions. The work so far has been

carried on only with Washington Navel Oranges and Marsh pomelos in California.

SOME NEW FRUITS ORIGINATED FROM THE NATIVE AND SAND CHERRY AND PLUM, N. E. Hansen (Bul. 130 S. D. Agr. Exp. Sta.).

This describes a large number of hybrids produced at the Station, and notes their behavior.

HORTICULTURAL INFORMATION: HOW TO OBTAIN IT, B. S. Pickett (Circ. 11, N. H. Agr. Exp. Sta.).

This contains lists of books and bulletins on fruit culture, vegetable gardening, floriculture and greenhouse management, and landscape gardening.

Among Experiment Station Workers

DANGER OF GENERAL SPREAD OF THE GIPSY AND BROWN-TAIL MOTHS THROUGH IMPORTED NURSERY STOCK.

Farmers' Bul. 453, C. L. Marlatt. April, 1911.

That the presence of a single egg mass of the brown-tail or gipsy moth which is overlooked in inspection is sufficient to establish the pest in the country is one of the statements made in this valuable bulletin. These egg masses or nests contain from 300 to 400 young caterpillars, and since it has been shown that during July the moths can fly as great a distance as from Boston to New Brunswick, interested persons will need nothing further to convince them that even one nest is too many to overlook. The brown tail is much more widely distributed than the gipsy moth, having been spread over some twenty states during 1909 and 1910 with importations of nursery stock from Europe—chiefly from northern France. It is evident that in several of the European countries there has been great indifference with regard to the inspection of nursery stock prepared for exportation, and it is largely through the efforts of officials of the United States Department of Agriculture and interested nurserymen, that such inspection is now being established. While the presenee of these pests may not become known for years, there is during all that period the danger, we may almost say the certainty that they will be spread during each season to more or less distant localities. So great is the destructive work of these two moths that orchards have been completely destroyed, and forests almost denuded, and the national government is now appropriating \$300,000 annually to assist in their control in Massachussetts alone.

The statements contained in the following paragraph from the bulletin will undoubtedly come as a surprise to many, and will serve to doubly, trebly, strengthen the belief that there is need for quarantine legislation covering the introduction of infected nursery stock.

"In addition to the great monetary loss, the brown-tail moth exereises a very deleterious effect on health. The hairs which eover the caterpillars of this moth are strongly nettling, and not only are they so from accidental contact with a caterpillar which may fall on clothes, face, neck, or hands from an infested tree, but also from the myriads of hairs which are shed by these eaterpillars when they transform to the chry-

salis state. The latter fall and find lodgment on clothing, or collect on the face, neck, or hands, and frequently cause very disagreeable and extensive nettling, the effects of which may last for months. Breathed into the lungs they may cause inflammation and become productive of tuberculosis. All of the assistants who have been connected with the Government work with these pests in the New England States have been seriously poisoned. Two of them have had to give up their work and go to the Southwest to attempt to recover from pulmonary troubles superinduced by the irritating hairs of the brown-tail moth."

NURSERYMEN CO-OPERATE WITH SCIENTISTS IN STUDYING PLANT DISEASES

Pear blight in its twig form, as well as its canker form, has been one of the nurserymen's serious enemies for many years. In the Middle West it often takes on epidemic form, and is disastrously destructive. It is interesting to note that some nurserymen are alive to the necessity of studying with great care these diseases. In the spring of 1909, aco-operative arrangement was entered into between C. W. Stuart & Co., of Newark, N. Y., and the College of Agriculture at Cornell. The purpose of this agreement was to study and demonstrate the control of blight in one of their nurseries near Orleans, New York. To this end, a field laboratory was established on the grounds and maintained continually from June 4 to September first. One man inspected and removed from the one hundred thirty acres devoted to pear, apple, and quince all the blighted twigs or blighted trees which appeared during that time. This effort resulted in the prevention of a possible epidemic, and the following table shows the result of the campaign:

	Apples.	Pears,	Quince.	Total.
No. of trees from which blighted shoots only were removed	834	32	1451	2317
No. trees entirely removed	83	7	256	346

These results are described in Bulletin 272 of the Cornell Experiment Station, in which it is explained that the heavy cuttings made in the quinces were due to the numerous cases of blight carried over in old cankers from the previous season. The germs spread from these centers and cause infection in the new growth. Many of the quince trees removed were killed by infections of the previous season. In the case of the apples, most of these were first year buds, composed of a single succulent shoot, which, when struck by blight, is usually killed with great rapidity. It is evident from the figures that over 2000 trees were saved by pruning and disinfection. It is impossible to say how many trees these might have infected had they been allowed to remain. The moral of the story is that prevention, when systematically carried out, is successful in controlling pear blight.

COLORED RAFFIA TO DESIGNATE GRADES OF TREES

Many nurserymen who grow calipered trees are now using Colored Raffia to designate the grade. The one inch trees can be tied with red, the one and one-half inch with green, the two inch with blue, etc. Calipering can be done during the dull season, all ready for the shipping rush. Not all laborers can size up trees, but they can all tell blue from red.

Fruit and Plant Notes

WASHINGTON LANDS PROFITABLE FOR FRUIT

The following from the *New York Packer* will show where a few million of the trees raised in western nurseries go:

"Seven counties in eastern Washington have under cultivation 6,930,389 apple, 1,251,735 peach, 743,963 pear, 207,018 cherry, 182,931 prune and plum and 94,873 apricot trees, according to reports compiled by F. A. Huntley, state commissioner of horticulture. Walla Walla, Stevens and Benton counties, in which the count is not yet completed, it is estimated, will bring the number of apple trees to 10,000,000.

Commissioner Huntley reports the acreage: Apples 126,116; peaches, 11,590; pears, 6,888; cherries, 1,916; prunes and plums, 1,693; apricots, 878."

PECAN TREES AND THE HURRICANE

A correspondent from Charleston, South Carolina, gives the following interesting account of the results of the storm which passed over that section of the country a few weeks ago:

"Probably you would like to hear something of the effect of a 125 mile hurricane on a bearing pecan grove. To be brief, hardly a leaf uninjured was left on the trees, and in a few days the trees presented the appearance of midwinter. In about ten days, new growth appeared, and in a month from the storm or hurricane, the trees were again in full leaf, and in many instances catkins appeared on the trees; and now you see nuts, old leaves, new leaves, and catkins on the trees. My loss has been considerable from the amount of nuts blown off, and of the nuts left, some are black. One of the groves suffered less than the others, and I have apparently a fair crop of nuts left on that grove. I am glad to be able to state that the loss to the trees I consider very slight; of course many limbs were broken off, and a few trees had the tops blown out; but in all the groves I lost only two trees uprooted; and strange to say, these two uprooted trees had no tap root."

AMERICA, THE WORLD'S FRUIT BASKET

More each year the civilized world is looking to America for its supply of fruit in its fresh, preserved and dried forms; the ports of all nations are open to our fruit-laden ships, the foreign markets each year call for an increasing quantity of our fruits at prices which make exporting a highly desirable and profitable branch of American orcharding. And rarely are our home markets fully supplied—and the demand continues to increase.

We were blind did we not see the meaning of these conditions as they may be applied to our industry. O-p-p-o-r-t-u-n-i-t-y is spelled in capital letters. Grasping them is our problem—our seeming problem. In reality, there is no problem presented other than that of applying initiative, energy and enthusiasm.

Shall it be said of us, that in an era of wide open opportunities the nurserymen were sluggards, lacked the perception to see the open door of progress, fell by the wayside and were beset with dry-rot? I hope not—I look forward to a new

energy being born into us, an energy of a degree which makes all things possible.

THE CHESTNUT DISEASE

Inquiries are being received as to the advisability of planting chestnut groves, and what variety to plant. Attention was drawn in the editorial columns of the *NURSERYMAN* recently to the disease which is so rapidly destroying chestnut trees in some sections. We would like to hear from subscribers in regard to this disease. Is your locality free from it as yet? How soon after it attacks a tree are you able to detect its presence? Have you found any variety that is free from it while other varieties nearby are attacked? Is it more likely to attack a bearing tree, or one in the nursery row?

I NEVER KNEW

I never knew the art required
To fry an egg;
And it has always made me tired
To find a dreg
Within my morning's coffee cup;
And I have spurned
My breakfast toast, if I got up
To find it burned.

I never knew how much of art
It takes to broil
A beefsteak to delight the heart
And not to spoil
The luscious flavor of the meat;
And German fried
Potatoes seemed a simple feat
Until I tried.

I never knew the great finesse
A cook must show;
I never even tried to guess,
But now I know;

For while my wife has been away
I ran the shack
And did the cooking! Hip, Hooray!
She's coming back!

And never more I'll make complaint
If toast is burned
And coffee seems to have a taint;
For I have learned
By sad experience, and rude
And bitter smart
That even cooking breakfast food
Is quite an art.

Exchanges.

WEST VIRGINIA ORCHARD COMPANIES

Charleston, W. Va., Sept. 28. Charters have been issued to the following: Eureka Orchard Co., of Moorefield, capital, \$25,000; incorporators, Dr. H. D. Gamble and Floyd B. Watkins, of Moorefield; E. M. Baker, John A. Mikesell and Seth A. Allen, of Waynesboro, Pa.

The Eva-Mar Orchard Co. of Martinsburg, to grow orchards in the Gerardstown district in Berkeley county, capital \$5,000; incorporators, T. W. Martin, William F. Evans, H. O. Evans, A. S. Evans and J. W. B. Evans, all of Martinsburg, W. Va.—*New York Packer*.

Commercial orcharding is on the increase in the east as well as the west. Capital is beginning to regard orchard enterprises as safe and profitable.

Correspondence

The following letter, received after the publication last month of correspondence on European conditions, sounds a little more cheerful:

BETTER THAN USUAL

ED. NATIONAL NURSERYMAN:

Sir: Having just returned from a trip to Germany on Saturday, I am glad to assure you that I was surprised to find the nursery stock around Halstenbek **better** than ever before. In fact, the drouth, which in that vicinity was not as bad as in other parts of Europe, seemed to have had no evil effect whatever on the plants. Especially the white pine seedlings and transplants, as well as the Norway spruces, are in a splendid condition, also the apple seedlings (5-8 mm. diam.). Those American nurserymen who visited the nurseries of J. Heins' Sons, Halstenbek, this summer will certainly testify the truth of this report.

Very truly yours,

OTTO HEINECKEN.



Mazzard Cherry, one-year, as grown by Doornbosch & Son, Veendam, Holland.

Our Exchanges

GROWS APPLES ON HAW BUSH

Orlando, Fla., Sept. 15.—Frank Johnson has succeeded in grafting a hardy apple stock on a haw bush and the experiment has been successful. The apple tree is two years old and has a crop of nineteen apples, which are smooth and of good size and when ripe will be of good marketable stock.—*New York Packer.*

Catalogues Received

Thomas Meehan & Sons, Germantown, Philadelphia, Pa. Meehan's Garden Bulletin, September-October, 1911.

Glen Saint Mary Nurseries, Glen Saint Mary, Fla. Catalogue of fruit and nut trees, ornamentals, etc., for 1912. Illustrated with colored plates.

P. J. Berckmans Co., Augusta, Ga. Catalogue of fruit trees and ornamentals for 1911 and 1912.

E. Y. Teas & Son, Centerville, Ind. Wholesale Price List, fall 1911.

The Griffing Bros. Co., Jacksonville, Fla. Griffing's Tree Prices, Season 1911-1912.

Barbier & Co., 16 Route d'Olivet, Orleans, France. Nursery trade list for autumn, 1911, and spring, 1912.

Woodlawn Nurseries, Allen L. Wood, Prop., Rochester, N. Y. King Apple.

Huntsville Wholesale Nurseries, Huntsville, Ala. Price list, October, 1911.

Benjamin Connell, Merchantville, N. J. Price list of miscellaneous stock.

Lewis Roesch & Son, Fredonia, N. Y. Price list for fall, 1911, of grape vines, fruit trees, small fruits and ornamentals.

Winfield Nursery Co., Winfield, Kans. Wholesale price list Bulletin No. 2.

D. H. Henry, Seneca Nurseries, Geneva, N. Y. Surplus list.

Ellwanger & Barry, Rochester, N. Y. Catalogue of Peonies, for fall planting, also Irises, Phloxes, and Bulbs.

Wm. H. Moon Company, Morrisville, Penn. Wholesale catalogue of choice ornamental nursery stock.

F. & F. Nurseries, Springfield, N. J. Fall Trade list.

Bloodgood Nurseries, Flushing, L. I., N. Y. Price list.

P. J. Berckmans Company, Augusta, Ga. Catalogue for 1911 and 1912.

A very pretty cover in colors showing the Magnolia Soulangeana on one side and azalea indica at Fruitland Nurseries.

Sydney Smith, Tansley Old Nurseries, Near Matlock, Derbyshire, England. Trade catalogue of nursery stock.

J. Cheal & Sons, The Nurseries, Crawley, England. Special trade offer of Fruit Trees, Ornamental Trees and Shrubs.

King's Acre Nurseries, Ltd., Hereford, England. Trade catalogue of Fruit Trees, Roses, Clematis, Ampelopsis, etc.

Cooper & Rogers, Winfield, Kans. Wholesale price list.

James Sons, Ussy, France. Wholesale catalogue of nursery stock for Fall and Spring.

Glen St. Mary Nurseries, Glen St. Mary, Fla. Catalogue for 1912 Very attractive, and contents are practical.

Chas. Detriche, Angers, France. Catalogue for Fall and Spring.

Youngers & Co., Geneva Nurserie, Geneva, Neb. Bulletin No. 1.

Waco Nursery Co., Waco, Texas. Wholesale price list.

Barbier & Co., Orleans, France, 16 Route d'Olivet Nursery trade list, for fall and spring.

American Forestry Co., S. Framingham, Mass. Wholesale price list of American Forest Tree Seeds.

J. C. Hale Nursery Co., Winchester, Tenn. Wholesale price list for spring and fall.

The Morris Nursery Co., West Chester, Pa. Trade list for fall, 1911.

Aurora Nurseries, Aurora, Ills. Wholesale trade list.

NATIONAL NURSERYMAN PUB CO.

I herewith inclose \$1 for renewal of your valuable and interesting paper for another year. The regular visits it makes are a constant pleasure and inspiration to me and I cannot see how any live nurseryman can do without it. Give us more pictures if possible.

WISE AVE. NURSERIES,

Illinois.

JOHN M. WISE.

The Cureton Nurseries, Austell, Ga., offer for Fall delivery Apple, Pear, Peach, Cherry, Plum, Figs, Mulberry, Pecan, English Walnut, Grapevines, Roses, Magnolia Grandiflora, Carolina Poplar, 5,000 California Privet, 10,000 Amoor River Privet, French Apple Seedlings. All clean, healthy stock. Write for wholesale price list.

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The Forest Conservatory

WILD FRUITS, FLOWERS AND EVERGREENS

Oregon Grape, Huckleberry, Salmonberry, Blackberry, Rhododendrons, Flowering Currants, Ferns, Madronas, Firs, and other Natives of the Pacific Northwest Coast.

JOEL SHOMAKER, Nellita, Washington

BERRY PLANTS and ROOT CUTTINGS of Blackberries, Blueberries and Raspberries at half price, including the famous Hoosier Black Cap originated by us and pronounced the largest and best, by United States Department, Year Book, 1910. 50 per cent. saved. Catalog free.

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Dept. E.

PEKIN, INDIANA

Peach Trees and Strawberry Plants

all leading market sorts for Fall 1910 and Spring 1911

MYERS & SON, Bridgeville, Del.

GRAPE VINES

We offer for Fall and Spring delivery the largest and most complete stock of GRAPE VINES in strong grades for nurserymen and dealer's trade.

We also have an extra fine block of President Wilder currants which have made a strong growth.

SEND LIST OF YOUR WANTS FOR PRICES

T. S. HUBBARD COMPANY

Established 1866

FREDONIA, N. Y.

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One and two year Apple; One year and June Bud Peach; California Privet, in car-load lots. Also Magnolia, Grandiflora, Arbor-Vitea, Norway Spruce, Md Plantier, and Baltimore Bell Roses. Ask for prices.

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Extra size, 6 to 7 ft.; 1 inch and up 5 to 6 ft.; 3-4 and up. Mostly Bartlett.

Can also furnish a few of the leading varieties.

It will be worth while to get our prices before buying elsewhere Address,

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Large assortment of Tree, Shrub and Fruit Seeds for ornamental and forestry purposes. Send for catalogue.

CONYERS B. FLEU, Jr., GERMANTOWN, PHILA.

SEEDSMEN REQUIRING THE VERY BEST SELECTIONS OF

GARDEN SEEDS

(Vegetable and Flower), especially Kelway's Celebrated English Strains can get them at lowest independent wholesale rates by sending their orders direct to

KELWAY & SON, Wholesale Seed Growers,

LANGPORT, SOMERSET, ENGLAND. Special quotations on application.

Surplus Stock Peach Seed

Removal Sale of Surplus Stock of some 2000 Bushels Virginia Natural Peach Seed that we offer at 50% Reduction. Special Inducements On Car Lots.

W. W. WITTMAN & CO. - Baltimore, Md.

Phone 4382 St. Paul

P. OUWERKERK,

No. 216 Jane St., Weehawken Heights, Hoboken, N. J.

Rhododendrons, Clematis, H. P. Roses, Hardy Azaleas, Paeonies, Magnolias, Box Trees, Fancy Conifers, Hydrangeas and Shrubs, our specialties at our HOLLAND NURSERIES. Some of the goods on hand here during the packing season.



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What some nurserymen think of

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ISAAC HICKS & SON, Westbury Station, N. Y. "PARK AND CEMETERY is one of our favorite periodicals, from which we get many valuable points on landscape work."

THE ELM CITY NURSERIES, New Haven, Conn. "Every issue of PARK AND CEMETERY is well filled with valuable and interesting information."

EDWARD TEAS, Joplin, Mo. "PARK AND CEMETERY is to me the most useful and valuable paper ever published."

No better medium for reaching professional landscape gardeners, superintendents of parks, cemeteries, public grounds, foresters, street tree commissions, etc.

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Large Stock, 1 and 2 years

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For FALL 1910 and SPRING 1911

Grape Vines, Currants and Gooseberries
in all varieties and Grades

—also—

Grape and Currant Cuttings and Light
Grade of Vines for Lining Out
in Nursery Rows

WRITE FOR PRICES

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FRUIT AND SEED FARMS

OFFER for Spring 1911

GRAPE VINES—One and two years old. Varieties largely Moore's Early, Concord and Niagara.

Also Scarlet or Crimson Clover Seed and Cow Peas. Free from weed seeds, all re-cleaned and guaranteed first class.

Correspondence solicited. Price list upon request.

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P. O. Address, Salisbury, Wicomico County, Md., R. F. C. 3

Long Distance Phone and Telegraph, Salisbury, Md.

Vincennes Nurseries,

W. C. REED, Prop.

VINCENNES, IND.

Specialties for late fall shipment. Special prices will be quoted on the following for late fall shipment:

PEACH, one year, general assortment; all leading varieties, car lots or less.

CHERRY, two year $\frac{3}{4}$ up, extra fine; also lighter grades. Early Richmond, Montmorency, Ollivette, Osthien, Baldwin, Louis Phillipi, Gov. Wood, Black Tartarian, Napoleon, etc. Also fine lot of Sweets one year late Duke, Royal Duke and sour sorts.

SILVER MAPLES, 10 to 12 ft., 8 to 10 ft., 6 to 8 ft.

We shall collect large quantities of

Tree Seeds

this season, such as *White, Jack, and Red Pine, White Ash, Balsam* and many others.

If you want TREE SEEDS send us the species and amount of seed required, and we will quote prices.

The North-Eastern Forestry Co.

NEW HAVEN, CONNECTICUT

E. T. DICKINSON,

CHATENAY SEINE, FRANCE.

Grower and Exporter of

French Nursery Stocks, Dutch Bulbs, Gladioli, Etc. Fruit Tree Stocks. All grown for the American trade.

PEAR AND CRAB APPLE SEED,

The most complete assortment of Ornamental Stocks, Trees and Shrubs.

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Box 284

HOBOKEN, N. J.

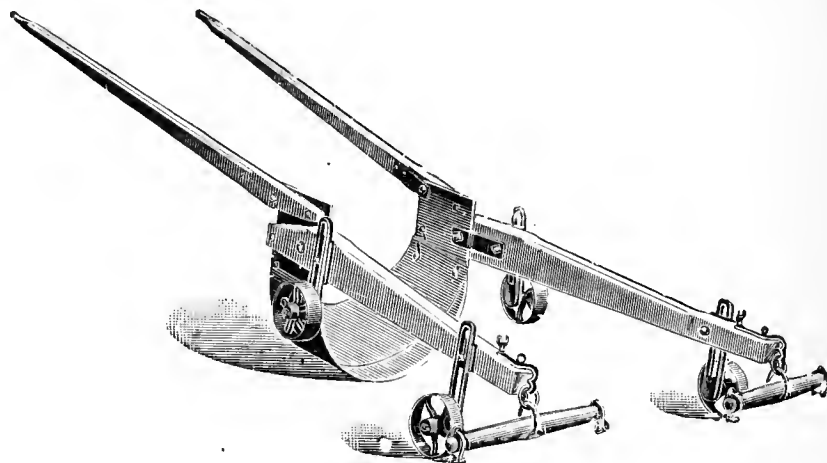
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BRAGG'S

COMMON SENSE

TREE DIGGER

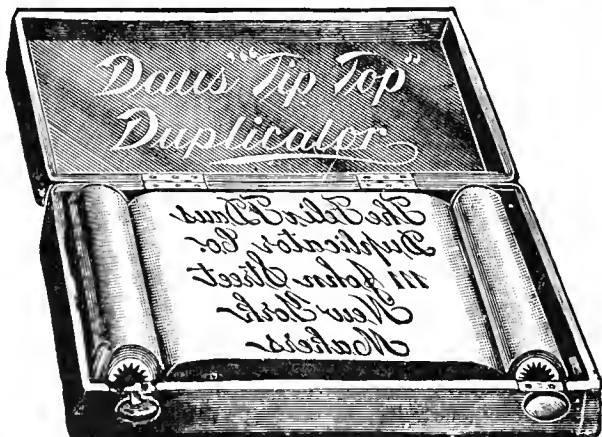
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Digger gets all the roots at the rate of
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TRY IT YOURSELF FOR 10 DAYS WITHOUT DEPOSIT

If not satisfactory, simply return it and no questions asked.

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WE OFFER A COMPLETE ASSORTMENT OF NURSERY
STOCK CONSISTING OF

Apple	Poplar Carolina	Ampelopsis
Pear	Poplar Volga	Roses
Plum	Elm American	Evergreens
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Small Fruits	Syringeas	Fruit Tree "
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Our stock is well grown and graded. Prices are such that it will pay to investigate. Come and see us or write.

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GREENFIELD, IND.

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IN COMMERCIAL VARIETIES

NORWAY MAPLE,
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CALIFORNIA PRIVET,
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Large stock of Polyantha (Baby) Roses and
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Nursery Budding Knives, 25c Pocket Budding Knife, 35c. All Steel Pruning Shears, California Pattern, post paid, \$1.
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We still have a large lot of Scions to offer. Write for prices.

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150,000 DWARF ROSES

Selected sorts. Astonishing cheap prices on application.

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Lombardy and Carolina Poplars

Fine trees, 6 to 15 feet, 1/2 in. to 3 in. Cal.

CALIFORNIA PRIVET, 2 yrs., 2, 3 and 4 ft., well branched.
CALIFORNIA PRIVET, 3 to 6 ft., sheared globe shape and pyramidal and single stem.

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Four varieties Raspberry Plants, Erie Blackberry, etc.

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Booking orders for
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225 Varieties

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THE **LEEDLE FLORAL COMPANY**
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PRICES ON
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SMALL FRUIT PLANTS ROOT CUTTINGS, ETC.

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Apple Scions from Hood River bearing orchards. Send for list. Hood River Strawberry Plants, American Arborvitae, 4 to 6 inches, nice stocky plants. Small nursery with homestead relinquishment for sale, in the Rogue River Valley, Ore. Address

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BALES IN 22 STATES

PRICE, \$16.00

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SILVER MAPLES

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5,000 California Privet, one year old

5,000 " " four " heavy branched

200,000 " " two " "

30,000 Upright Iboia Privet, one year old

10,000 King Humbert Cannas

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ROSA CANINA

Let us quote your want list and show you where you can save money on the best stocks obtainable. Inquire of

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Sole Agents for **DOORNBOSCH & SON**, Fruit Stock Specialists, Veendam, Holland



Partial View of Persimmon Trees in Nursery, shown in our Retail Catalogue, page 23.

GLEN SAINT MARY NURSERIES CO.
Dept. 3, Glen Saint Mary, Florida

**PERSIMMONS
PRIVET
ARBORVITAE**
Florida-Grown
True to Name

Your trade will be quick to see the value of Glen Saint Mary stock—our methods of propagating assure quality and satisfactory results, and much of our product will succeed practically all over the North. Let us know your wants—we'll gladly supply prices and particulars on request.

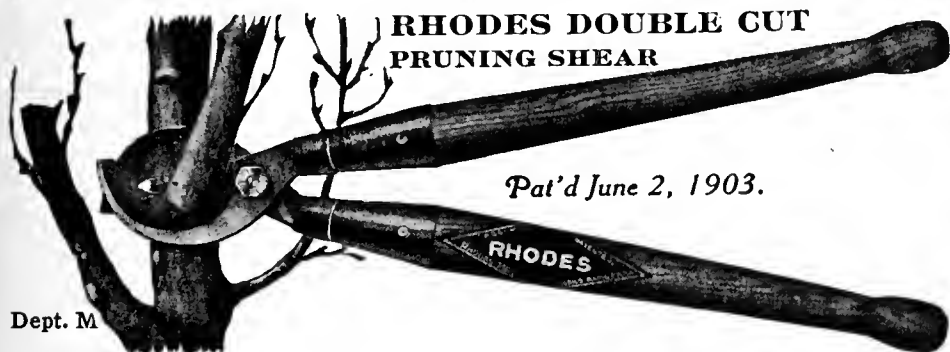
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Growers and Exporters of all kinds of Nursery Stock.

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Dept. M

Rhodes Manufacturing Co., Grand Rapids, Mich.

The only pruner made that cuts from both sides of the limb and does not bruise the bark. Made in all styles and sizes. We pay express charges on all orders. Write for circulars and prices.

BLACK LOCUST seedlings.

ASPARAGUS roots.

APPLE buds and scions

CAROLINA POPLAR, 3 to 12 feet.

PLEASED TO QUOTE YOU NOW.

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ESTABLISHED 1866

W. T. HOOD & CO.

"OLD DOMINION NURSERIES"

GROWERS OF

High Grade Nursery Stock

RICHMOND, VA.

Offer for Fall, 1911, and Spring, 1912. PEAR AND CHERRY, 1 and 2 yr. Also CALIFORNIA PRIVET, 1 and 2 yr. Extra fine. Write for quotations.

LET ME QUOTE YOU PRICES ON ALL

**Conifers and Broadleaved
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GUARANTEED FRESH, TRUE TO NAME AND OF
GOOD GERMINATION.

J. F. VON HAFFTEN, Consulting Forester
Winfield Jt., LONG ISLAND

The New England Nurseries, Inc.

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HIGH GRADE FRUIT AND ORNAMENTAL
TREES, SHRUBS, ROSES AND
HERBACEOUS PERENNIALS

We grow everything required for Orchard, Garden,
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Catalog and Trade-list on application.

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Grown from French seed on new land, free from
aphis and knot, well graded by experienced graders.
Send for our *SPECIAL PRICES* stating quantities
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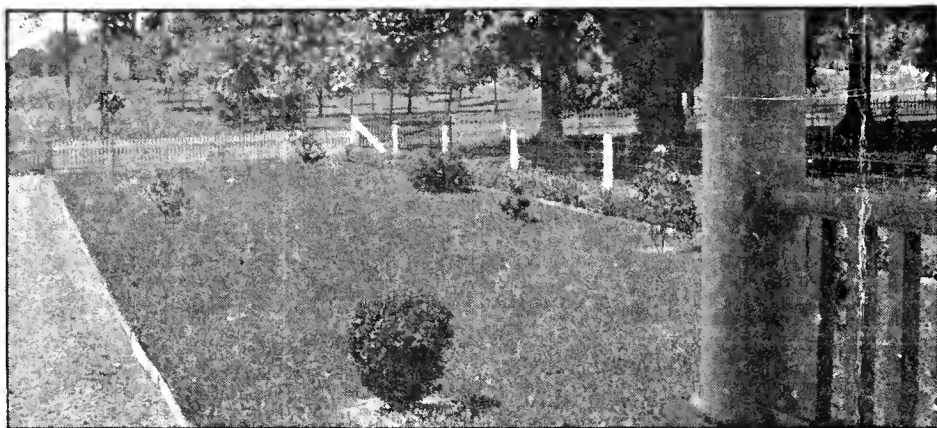
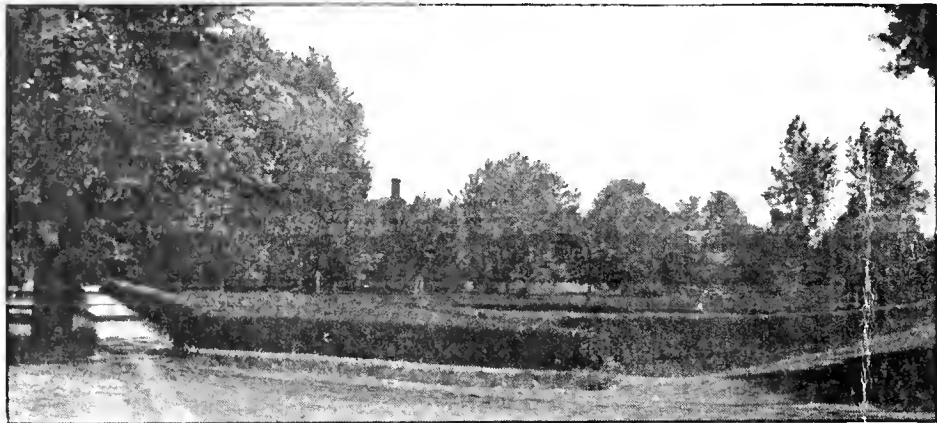
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THE NATIONAL NURSERYMAN



DECEMBER, 1911

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

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Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
Plants, Grapes, Gooseberries, Small Fruits, Bulbs, Seeds, Palms
and other tender Greenhouse Plants

Have a large stock stored in frost proof cellars that can be shipped at any time desired;
switch from N. Y. C. lines direct into our packing house; can load without exposure.
Unsurpassed facilities for handling orders large or small. Catalogs and price lists free.

A few specials while they last:

STANDARD PEARS in assortment DUCHESSE DWARF PEARS BOURGEAT QUINCE
PRUNUS PISSARDI and TRILOBA CUTHBERT AND OTHER RASPBERRIES
CONCORD AND OTHER GRAPES



DOUBLE FLOWERING ALMOND

Our Specialties are: Roses, H. P. Moss, Ramblers, Climbers, etc., Peaches, Pears, Plums, Cherries,
Ornamental Trees and Shrubs in car lots, Weeping Mulberries, Elm and Ash,
Clematis, Ampelopsis, Paeonies, Hydrangeas, Bush and Tree Perennial Plants.

No Trouble to Price your List of Wants 55 Years 1200 Acres 44 Greenhouses

THE STORRS & HARRISON CO.

PAINESVILLE, OHIO

AMERICAN

ELMS...

SPLENDID TREES

Sizes one to two inches caliper

Ellwanger & Barry

MOUNT HOPE NURSERIES

ROCHESTER, N. Y.

Jackson & Perkins Company

offer to the trade an unusually complete assortment of Fruit and Ornamental Stock, including some things scarce and hard-to-find; their Tree Hydrangeas, Tree Lilacs, Roses, Clematis, Ampelopsis Veitchii, Dwarf Apples, Cherries on Mazzard, and a few other Specialties, have earned for the J & P goods the name of

"PREFERRED STOCK"

A few more buyers can be taken care of very well. Want Lists are invited. Price List will be sent on request. The address is

Jackson & Perkins Company

Dispensers of The Preferred Stock, grown at
NEWARK, which is in WAYNE COUNTY,
near Rochester, New York

SPECIAL NOTICE

APPLE QUINCE PEAR CHERRY
PEACH PLUM

A Fine Block of
Own Root Roses

ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
EVERGREENS PEONIES PHLOX
PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

Write for our Special Prices

Special Attention given to Dealers, complete lists
and carload lots.

W. & T. SMITH COMPANY

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63 Years

700 Acres

Magnolia Grandiflora

Nothing can compare among broad-leaved evergreens with the beauty of foliage and flowers of our Southern Magnolia. Magnificent, large white flowers from the middle of April until August. Hardy at Philadelphia. 25,000 pot and field grown plants, all with finely branched roots, no better stock in America. Write for prices.



Your Trade Wants This Stock.

It pays you to have stock of such high quality as Berckman's Southern-grown trees and plants. We ship all over America and to many foreign points. Northern nursery stock cannot approach the splendid vigorous growth—the demands of our customers prove this.

PEACH TREES. All finest commercial sorts; absolutely true to name and free from disease. No cheap, inferior trees sold. All sizes. **ENGLISH WALNUT TREES.** Excellent quality. All size trees. **AUCUBAS.** Choice grown stock; best variety; all sizes of bushy and well-branched plants. **AZALEA INDICA.** 15,000 home-grown plants and plenty of imported stock. **OLEA FRAGRANS.** A most desirable, fragrant, flowering shrub for Southern gardens and Northern florists. **MAGNOLIA FUSCATA.** Various sizes in field grown and pot plants. **HEDGE PLANTS:** We have a large stock of **CITRUS TRIFOLIATA** and **AMOOR RIVER PRIVET (TRUE)**. **CONIFERS** of special merit: **BIOTA AUREA NANA** (Berckman's Dwarf Golden Arborvitea), **B. CONSPICUA**, **B. JAPONICA FILIFORMIS**, **CUPRESSUS LAWSONIANA**, **C. PYRAMIDALIS** and **RETINOSPORAS**.

We have the largest and most varied collection of Conifers in the South. A fine assortment of large specimens for immediate display. Write for prices on any of the above stock. Get our trade list and descriptive catalogue telling about our full line of Ornamentals, Fruits and Nuts. Your trade will appreciate the quality of Berckmans' stock. Real trade builders.

P. J. BERCKMANS CO., Inc., Fruitland Nurseries
Established 1856
Over 450 Acres in Nurseries
Augusta, Georgia

FOREST TREES FRUIT STOCKS

Shipments of over 160 Million of
Plants Annually

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J. HEINS' SONS

HALSTENBEK, No. 152

Near Hamburg, Germany

♦ ♦

Please write for Catalogue and Forest
Planter's Guide to our American Agent:

OTTO HEINECKEN

287 Broadway
NEW YORK CITY

The Best Tree Digger on Earth



Used and Recommended by Leading
Nurserymen.

The one we have used for years and by far the most satisfactory of any we have ever seen. It does exactly the work for which it was designed and does it right. If interested we will be glad to send description and prices.

Stark Bros. Nursery & Orchards Co.

LOUISIANA, MO.

C. M. HOBBS & SONS

BRIDGEPORT, IND.

APPLE—1, 2 and 3 year in leading sorts.

CHERRY—1 and 2 year fine stock.

PEAR—1 and 2 year in leading sorts.

PLUM—1 and 2 year Japan, European and native sorts.

PEACH—1 year leading sorts.

PRIVET—1 and 2 year fine stock.

SHADE TREES in car load lots Norway Maple, American Elm, Box Elder, Silver Maple, etc.

We also have a general line of other stock not mentioned above.

WANT LISTS INVITED.

We Offer the Wholesale Trade for Early Fall Delivery

CHERRY, 1 inch up, $\frac{3}{4}$ to 1 inch, $\frac{5}{8}$ to $\frac{3}{4}$ inch, and all under grades. Our surplus of 75,000 Cherry are first class in every particular.

APPLE, $\frac{5}{8}$ to $\frac{3}{4}$ inch, and all under grades. 100,000 surplus Apple that are making up good.

PEACH, PLUM, APRICOT, ALMOND, one year, mostly heavy grades.

PEAR, all grades, large surplus.

ONE HUNDRED THOUSAND 2-year, heavy California Privet. Special quotations in 50,000 lots. If in the market let us quote you.

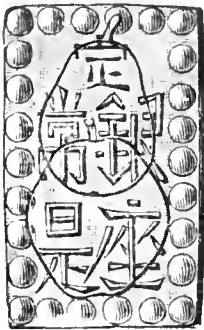
Want 200 bushel of Peach Seed.

WAXAHACHIE NURSERY CO.

J. R. MAYHEW, President

WAXAHACHIE, TEXAS

Heikes --- Huntsville --- Trees



Huntsville
Wholesale Nurseries
Huntsville, Ala.
JESSIE S. MOSS, Prop.

We offer for Fall of 1911 and Spring of 1912 in large quantities as usual:

SPECIALTIES

APPLES—Commercial varieties, one year, in large supply. As fine in quality as ever grown.

PEARS—Kieffers, one and two years old. A much smaller crop than heretofore.

CHERRIES—On Mazzard. One year. Bing, Lambert, Napoleon, Black Tartarian.

CHERRIES—On Mahaleb. One and two years. Ea. Richmond, Dyehouse, Montmorency, Wragg, Royal Duke, in small supply.

PEACHES—We excel in Peaches, and of these we will have as fine a stock as we have ever grown, both in one year and June Buds.

ROSES—Budded. We will have a large and fine stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.

PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.

MAGNOLIA G. F.—Huntsville grown. Handsome, young plants, transplanted.

See Price List for particulars.

Address, W. F. HEIKES, Manager,
HUNTSVILLE, ALA.

Have you seen and examined the quality and finish of our

Rawhide Brand of Shipping Tags and Tree Labels

printed or plain, strung or wired?



This stock is especially adapted to the most severe usage, being thoroughly waterproof & weather-proof. "Once used, always used."

Send for samples and prices. Our reference are the largest nursery men in the United States.

The Denney Tag Co.

WEST CHESTER, PENNSYLVANIA

FRENCH CRAB APPLE SEED

The last report from our collector of French Crab Apple Seed was very encouraging, and while we cannot promise definitely still we are pretty certain we will get the full amount of seed we have ordered. Under these circumstances we can now offer a limited supply of the best French Crab Apple Seed procurable, crop of 1911. The germinating quality of our seed is acknowledged by growers as the best.

Prices on application. Crab Apple Seed is scarce and in demand. You should order at once.

Thomas Meehan & Sons

DRESHER
PENNA.

BOBBINK & ATKINS

WORLD'S CHOICEST NURSERY PRODUCTS

- | | |
|---|--|
| ROSES, in all kinds and varieties | PALMS and BAY TREES by the thousands |
| EVERGREENS and CONIFERS, in several hundred kinds and varieties | Pot-grown FORCING PLANTS, Autumn Delivery |
| RHODODENDRONS, Hardy, ENGLISH HYBRIDS, Maximum and Catawbiense | FRUIT-TREES, home-grown, imported, DWARF and TRAINED |
| BOXWOOD, in all shapes, forms and sizes | SMALL FRUIT, in all kinds and varieties |
| HARDY AZALEAS, in all varieties and colors | INUT TREES, profitable kinds |
| FLOWERING SHRUBS, in bush and standard forms in hundreds of kinds and varieties | OLD-FASHIONED, Hardy FLOWERING PLANTS, in thousands of kinds and varieties |
| JAPANESE MAPLE, in all colors and varieties | PAEONIAS, IRIS, PHLOX FERNS, HARDY GRASS |
| SHADE TREES, in hundreds of useful and attractive varieties | KITCHEN HERBS and ROOTS |
| MAGNOLIAS and other FLOWERING TREES | RUTHERFORD PARK LAWN GRASS SEED |
| WEeping and STANDARD TREES, in many varieties | AUTUMN BULBS, Dutch, French and Japanese kinds |
| HEDGE PLANTS, in all popular kinds | Interior and Exterior DECORATIVE PLANTS, in large variety |
| HARDY TRAILING VINES and CLIMBERS | VISITORS to our nurseries are always welcome |
| HARDY VINES and CLIMBERS in pots | ASK FOR WHOLESALE CATALOG |
| SPRING and SUMMER FLOWERING BULBS, ROOTS and PLANTS | |

Nurserymen, Florists and Planters
RUTHERFORD, N. J.

ORNAMENTAL STOCKS

NURSERIES
420 ACRES

WE GROW

FRUIT TREE STOCKS—All Sizes.
300 varieties of Conifers, 1 to 4 years old.
1200 varieties of Ornamental Trees and Shrubs, 1 to 3 years old.
1600 varieties of New and Old Ornamental Trees & Shrubs in all Sizes.
250 varieties of Climbing Plants.
400 varieties of Conifers, 1 to 4 feet high.
400 varieties of Perennials.
800 varieties of New and Old Roses.

We Have No Agents.
Write direct to us and
ask for **WHOLESALE**
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TRANSON BROS. & D. DAUVESSE'S NURSERIES,

16 Route d'Olivet

BARBIER *and* CO., Successors,

Orleans, France

F. DELAUNAY

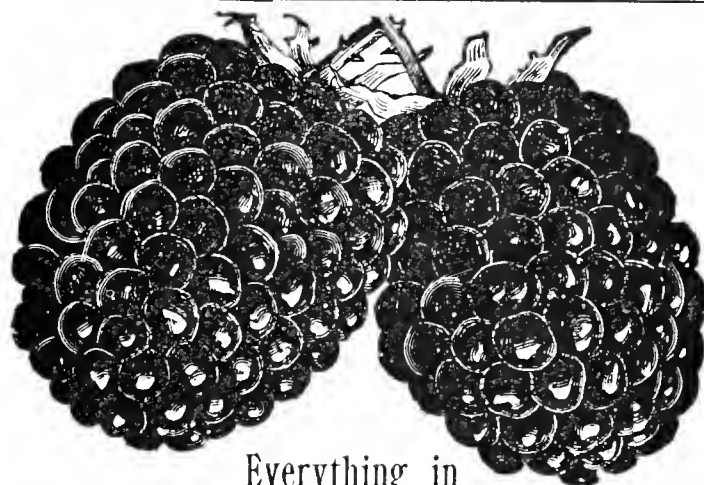
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FRANCE

GROWER AND EXPORTER OF

Apple, Quince, Cherry, Pear, Plum, Peach,
Stocks, Forest Tree Seedlings,
Evergreen and Ornamental Shrubs,
Rosa Manetti, Multiflora, etc.

CATALOGUE FREE ON APPLICATION



Everything in

SMALL FRUIT PLANTS

100,000 Transplanted Raspberry Plants

Ask for price list.

W. N. SCARFF, New Carlisle, O.

WOOD LABELS

For Nurserymen and Florists

The kind that give satisfaction.

Facilities for the handling of your requisite, combined with the quality of our product is unsurpassed.

Samples and prices are at the command of a communication from you.

Dayton Fruit Tree Label Co.

South Canal St., Dayton, Ohio

ROSES and SHRUBS

Alba Rubifolia.....2 yr.	Altheas, 8 kinds, all sizes
Alberic Barbier.....2 yr.	Berberry, from cuttings
American Pillar.....3 yr.	Deutzias, 5 kinds
American Pillar.....2 yr.	Forsythias
Dorothy Perkins.....2 yr.	Hydrangea Paniculata Grandiflora
Dr. W. Van Fleet.....1 yr.	Philadelphus, single and double
Farquhar.....2 yr.	Privet (California)
Hiawatha.....2 yr.	Spireas, 3 kinds
Lady Gay, 4 to 6 ft.....2 yr.	Weigelias, 4 kinds, Eva Rathke, Etc
Manda's Triumph.....2 yr.	Viburnums, Opulus and Plicatum
May Queen.....2 yr.	
Prairie Queen.....2 yr.	
Ruby Queen.....2 yr.	
Universal Favorite.....2 yr.	
Violet Blue.....2 yr.	
White Rambler.....2 yr.	

THE CONARD & JONES CO.
WEST GROVE, PA.

TO THE AMERICAN TRADE FOREST PLANTS

SPECIALLY:

DOUGLAS FIRS, JAPANESE AND COMMON
LARCHES, SITKA-BLUE-NORWAY SPRUCES,
ETC., are grown and offered in large quantities by

GUST. LÜDEMANN, "The Nurseries"

Halstenbek, nr. Hamburg, (Germany)

Special prices and particulars on application



Small Fruit Plants for the Nursery Trade, Fall 1911

Black and Purple Raspberry Tips, Red Raspberry, Blackberry, Dewberry, Gooseberry Layer Plants, Orange Quince, Gooseberry and Currant Cuttings, Asparagus, Horseradish. Rhubarb 1 and 2 year old Roots, also divided Roots. Write for prices.

P. D. BERRY, Dayton, Ohio

POOR ORCHARDS MADE GOOD

Six years ago one-half the trees in the orchard of the Fairview Orchard Company, Kearneysville, W. Va., were tagged by the Inspector, who reported it the worst scale-infected orchard he ever saw. After four years' use of "Scalecide" exclusively as a Winter wash, the same orchard is pronounced one of the cleanest in the State, and produced in 1910 over 11,000 barrels of apples, which sold for over \$29,000. If the continued use of "Scalecide" brings an orchard that is half dead to life, is it reasonable to expect injury to a good orchard? "Scalecide" shows greater fungicidal properties than any other Winter wash. "Scalecide" has no substitute. A postal request to Dept. "B" will bring you by return mail, free, our book, "Modern Methods of Harvesting, Grading and Packing Apples," and new booklet, "SCALECIDE, the Tree-Saver." If your dealer cannot supply you with "SCALECIDE," we will deliver it to any R. R. Station in the U. S. east of the Mississippi and north of the Ohio Rivers on receipt of the price: 50-gal. bbls., \$25.00; 30-gal. bbls., \$16.00; 10-gal cans, \$6.75; 5-gal cans, \$3.75. Address, B. G. PRATT COMPANY, 50 Church Street, New York City.

FUNGOUS DISEASES OF PLANTS

By BENJAMIN MINGE DUGGAR

Professor of Plant Physiology in Cornell University

This book is designed to serve as a substantial reference book and is the result of special experience in the study of the practical aspects of plant pathology. There is a comprehensive discussion of the chief fungous diseases of cultivated and familiar plants. Each disease is discussed with reference to its occurrence, the nature of the lesions or processes induced, the structure, life history, and cultural relations of the casual fungus, and practical methods for prevention or control.

The literature of the subject is freely cited, and a host index provides a ready reference to all of the important fungous diseases occurring upon any host. The method of treatment followed is intended to facilitate and stimulate the work of the nurseryman and practical fruit grower and to enlarge the interests of the general reader. The book is very fully illustrated from photographs and from drawings especially made for this work.

8 vo. 508 pages, Illustrated. \$2.40. Trade Edition.

Sent on receipt of price by

THE NATIONAL NURSERYMAN PUBLISHING CO., 218 Livingston Building ROCHESTER, N. Y.

35TH YEAR

Pan Handle Nurseries

WE OFFER A COMPLETE ASSORTMENT OF NURSERY STOCK CONSISTING OF

Apple	Poplar Carolina	Ampelopsis
Pear	Poplar Volga	Roses
Plum	Elm American	Evergreens
Cherry	Sycamores	California Privet
Peach	Mountain Ash	Buxus
Grape	Althea	Weeping Trees
Currant	Hydrangea	Catalpa Seedlings
Gooseberry	Barberries	Black Locust "
Small Fruits	Syringaeas	Fruit Tree "
Maple Norway	Clematis	Catalpa Speciosa Seed.
Maple Schwedlers	Honey Suckle	Etc., Etc., Etc.
Maple Silver	Wistaria	

Our stock is well grown and graded. Prices are such that it will pay to investigate. Come and see us or write.

J. K. HENBY & SON
GREENFIELD, IND.

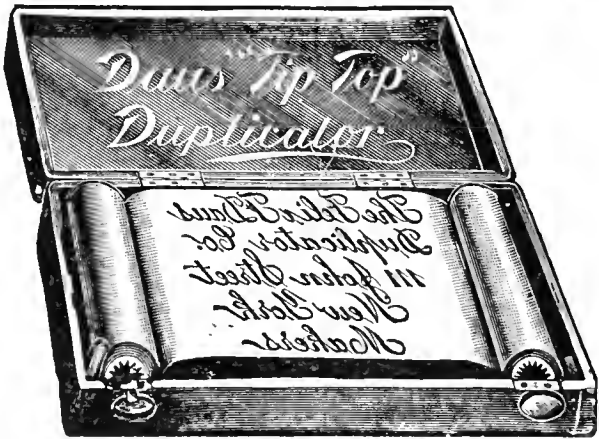
WE OFFER

PEACH TREES

IN COMMERCIAL VARIETIES

NORWAY MAPLE, CALIFORNIA PRIVET,
SILVER MAPLE 2-year

The Greenbrier Nursery Co., Inc.
Greenbrier, Tenn.



NOTE THE SIMPLICITY

OF MAKING PERFECT DUPLICATES WITH THE

Daus Improved Tip Top Duplicator

No intricate mechanism. No printers' ink. Always ready. 100 copies from Penwritten and 50 copies from Typewritten originals. Useful in any business for making duplicates of circular letters, trial balances, invoices, price lists reports menus, manuscripts, drawings, specifications, etc., etc.

SENT ON 10 DAYS' TRIAL WITHOUT DEPOSIT

Our negative rolls now have our new "Dausco" Oiled Linen Back, giving additional strength and efficiency.

CIRCULAR OF LARGER SIZES UPON REQUEST

Complete Duplicator, Cap Size \$7.50 Less Special Discount of 33 1/3%, NET \$5.00
Prints 8 3/4 x 13 inches - - -

Felix A. G. Daus Duplicator Co. Daus Building, 111 John Street, New York

"S. R. O."

On a night when a theater has sold its entire seating capacity, this above sign goes up—if the city laws as to overcrowding places of public assemblage are rigidly enforced.

Once in a great while a play is so popular that the "S. R. O." sign stays up night after night, and seats must be bought weeks ahead, if at all—a recent example was the unprecedented run in New York City of David Warfield's "Music Master."

The "S. R. O." sign went up in the Mount Pleasant Press early in November, and it will not be taken down again before the latter part of January, at the earliest—and this following a summer and fall of "playing to capacity houses," to borrow another theatrical phrase.

One of the reasons that kept Mr. McFarland from the St. Louis convention, in June, was the pressure of work requiring completion that week—and, throughout the months that have intervened, our presses have been kept busy. While many printers were complaining of dull times, we were put to it to make deliveries on time. Why? Our customers and friends tell why in the letters from which we quote on the next page.

Your chance to get advertising and printed matter that will cause your customers to write you as have those of Berckmans, The Berrydale Gardens, and Mr. Farr, is to let us begin *now* to plan stuff for you that can be delivered to you during February and March. More and more, we find, efficiency in booklets and catalogues for nurserymen is to a considerable degree in proportion as they are distributed close to the planting season. But we must start *now*, if we are to give you anything for spring circulation.



The McFarland Organizations HARRISBURG, PENNA.

J. Horace McFarland Company
*Engravers, Printers and
Binders*

The McFarland Publicity Service
*Practitioners of Selling
Science*

THE WM. H. MOON CO.

GLENWOOD
NURSERIES

Morrisville, Pa., Oct. 17, 1911.

*J. Horace McFarland Co.,
Harrisburg, Pa.*

Gentlemen: We have the highest esteem for the printing that you are doing, and feel that you have put nurserymen's advertising on a plane of excellence that it would never have attained in any other way.

Very respectfully,

THE WILLIAM H. MOON CO.

P. J. BERCKMANS COMPANY

Incorporated

Fruitland Nurseries

Augusta, Ga., Oct. 26, 1911.

*The McFarland Publicity Service,
Harrisburg, Penna.*

Gentlemen: We have just received a letter from Mr. R. C. Taylor, Supt., National Cemetery, Natchez, Miss., and we quote from same a "severe" criticism on the catalogue which you recently printed for us.

"I want to congratulate you on your catalogue for 1911-1912. It is conveniently arranged, the cuts are excellent, and, withal, it is a work of Art, if there ever was one. The front page cut is chaste and beautiful, and the BACK is just lovely. The cuts are original and the whole tout ensemble is just superb, therefore, I congratulate you."

With best wishes, I am

Yours very truly,

P. J. BERCKMANS CO.

BERTRAND H. FARR

Wyomissing Nursery

Growers of IRISES, PHLOXES, PEONIES, AND
HARDY PLANT SPECIALTIES

Wyomissing, Reading, Pa.,
Oct. 7, 1911.

*The McFarland Publicity Service,
Harrisburg, Penna.*

Gentlemen: I get one very general criticism of my catalogue from nearly all correspondents; that is, it makes them want everything in it. So far as the artistic point of view is concerned, they pronounce the color illustrations, etc., perfect.

Yours very truly,

B. H. FARR

BERRYDALE EXPERIMENT GARDENS

A. MITTING, Manager

Introducer of the Famous Himalaya
Giant Blackberry

Holland, Mich., Oct. 26, 1911.

*The McFarland Publicity Service,
Harrisburg, Penna.*

Gentlemen: We have received a very nice letter from The Wm. H. Moon Company, Morrisville, Pa., referring to our catalog, and believe you will be interested in this extract from it.

"Let us take this opportunity to congratulate you upon the very attractive booklet which you are sending out. It is far superior to the catalogues sent out by any of the other berry growers that we know of, and it seems that your firm must have the spirit of progress."

Very truly,

A. MITTING

The National Nurseryman

FOR GROWERS AND DEALERS IN NURSERY STOCK

The National Nurseryman Publishing Co., Incorporated.

Vol. XIX.

ROCHESTER, N. Y., DECEMBER, 1911

No. 12

INTERESTING COMMUNICATIONS FROM VARIOUS PARTS OF THE COUNTRY

THE SEASON. TRADE SUGGESTIONS

In this section at least, the past season was a very trying one, and due to weather conditions, nursery stock in general was damaged considerably. During the entire summer of 1910 we did not have sufficient rain to even lay the dust. This was followed by almost a snowless winter, and consequently, the ground was in an exceedingly dry state. This, coupled with drying winds which blew for weeks at a time, did much damage, especially to conifers. Conditions last spring, that is, so far as growing stock was concerned, were anything but favorable, as the drought, as we all remember, continued; and had we not been favored with rain in August at a time when the stock was merely fighting for an existence, the loss would have been enormous.

At present, shade trees of all kinds are greatly in demand, especially sugar maple and American elm. With the shrubs, hardy privets, *Berberis Thunbergii*, *Spiraea Van Houttei*, Honeysuckles, *Philadelphus*, Lilacs, and Green Barberry take the lead; and in the conifers, Douglas Spruce, White Pine, Norway Spruce, Concolor Fir, and American Arbor Vitae are mostly called for.

SELL GOOD SIZED STOCK

In our opinion, nurserymen should recommend, for two reasons, the use of strong bushy 2-3 ft., deciduous shrubs more generally than has been done in the past. First, it does not pay to handle large overgrown stock, five, six and seven feet high; and second, the same graceful effects cannot be produced with such large stock as with the former. It requires more care to handle (and care means expense) this large stock, on the part of both nurseryman and planter; and in a few years' time, the smaller stock will outgrow the latter. It is, therefore, evident that both nurseryman and planter are benefitted by the use of the smaller stock.

There seems to be a tendency on the part of some nursery firms to fill their competitors' orders with as poor stock as can be grown, packed in a very careless manner, and charge as much or more for it as selected stock to their retail customers. Whether it is done with the intention of hurting the trade of the firm compelled to buy, or whether the stock is grown cheaply and carelessly for wholesale trade only, is a matter of conjecture. The time always comes when we are compelled to rely on our competitor's honesty for the filling of an order and we should, therefore, have the same consideration for each other as for our retail customers.

NEW VARIETIES

Plants worthy of recommendation and comparatively new are *Ampelopsis Veitchi robusta purpurea*, a remarkable vigorous climber and perfectly hardy in this section, *Hydrangea arborescens sterilis*, and *Pyrus Arnoldiana*. This latter species, recently introduced by Mr. Wilson of the Arnold Arboretum and named after that arboretum, promises to be one of the finest plants of its kind and should prove a good seller when put on the market.

Waukegan, Ill.

R. DOUGLAS' SONS.

EASTERN NEW YORK TRADE ETHICS

We have found very little changes from previous years in trade conditions. Much the same methods have prevailed. The general policy of dealing with quantity rather than quality is still adhered to by many; and there is no fixed rule, for the most part, as to prices. The evil effects to the trade as a whole from selling to landscape architects and others not entitled to trade rates are yet in evidence. Nor have the Pharisees in the business—those small minded men who, in assuming a more-holy-than-thou attitude of superiority to their competitors, continue the oft repeated experiment of the boy who tried to raise himself by tugging at his boot straps, building themselves up by pulling others down—yet been eliminated. There are still those so obtuse that they fail to realize the effect of this kind of a boomerang policy. These unfortunates look through very green goggles when imagining that they can make commercial progress by speaking ill of competitors, when exploiting hot air as to their own claims for a prospective customer's recognition. You might well recommend to this contingent in the trade, who apparently have this sort of a microbe or mania for doing themselves harm and their competitors a corresponding benefit, the story of the back-action firing effect of the colored man's shot gun. I have known of some good orders lost to one or more supposably reputable nursery concerns in just this way, and conversely some valuable orders gained by their competitors for like reason.

NURSERY POLICIES

Then there is that sort of "Nursery Management" that will solemnly promise, either orally or in writing as preferred, one thing, and when that thing is promptly ordered proceed

directly to send quite another thing. While this practice brings, of course, its retributive reward, it does much harm, and the sooner it is stopped everywhere and by everybody, the better for all concerned. Some of the pressing needs of the times, especially in ornamental stock, are more careful and accurate grading, more frequent transplanting, and greater care in digging and packing all kinds of lawn and street trees, evergreens, and larger specimens. An Illinois nursery, not long ago, shipped a quantity of good sized pines and spruces as first class and well rooted trees, minus the important lower branches, and with roots chopped off like Christmas trees. Of course, there was trouble, as there should have been, all along the line.

ORNAMENTALS IN DEMAND

The kind of nursery stock most in demand in the East, say east of Chicago, is, we should say, really good ornamentals. Notwithstanding the unsatisfactory conditions in the industrial, transportation and financial affairs of the country since the panic of 1907, the use of all kinds of good hardy ornamental stocks has rapidly increased, and this growing demand must, from the increased interest in both public and private parks and fine ornamental grounds generally, be rapidly augmented in future. Fortunately this class of material is readily grown and freely produced, so that the supply should keep pace with the demand.

THE NATIONAL NURSERYMAN is performing a valuable service to the trade in calling forth the practical experiences of those having a wide range in the business; for it is from the observation and experience of others that we can all draw many valuable lessons for ourselves.

New York.

FRED'K W. KELSEY.

A VOICE FROM NEW MEXICO

I am growing stock only in a small way, planting from 10,000 to 15,000 trees of various sorts, principally apple. Our altitude is too high for the best results. I grow stock because I have difficulty in getting some of the varieties we want here. The name of the finest pear grown here I am unable to get. To be certain I shall have it, I grow it. Thousands of trees are planted here every season. I have about 90% of the trade.

Miami, N. M.

WM. MOHLER.

IMPROVE THE QUALITY

This has been a very good season for growing nursery stock in this particular locality. In May we had about three weeks of hot, dry weather which killed a great many newly planted shrubs and seedlings, but since that time we have had enough rain to produce a good growth on most ornamentals. For over a month we have had rain almost every day and stock has made a very rapid late growth, which is now ripening in good shape for the winter.

Trade conditions during the early part of the season seemed slow, but at the present time look right, and with proper weather conditions all the nurserymen around Chicago will do a good business.

There is a steady demand for almost all kinds of ornamentals, but especially for first class stock in all lines. The

time is now here when we should strive for quality as well as quantity. Stock that has merit will bring a good price at any time.

Knowledge of what constitutes good stock is increasing in the public mind, and it is therefore up to the nurseryman to produce an article that will give satisfaction to his trade.

Aurora, Ill.

AURORA NURSERY COMPANY.

CHARACTERISTICS OF THE SEASON

This has been a very peculiar and unusual season in our section. It has been the hottest and driest summer on record, that is, from March 1st to August 1st. Since August 1st, we have had plenty of rain and warm weather up to the present date. Ten years ago (1901), taking the season from March 1st to October 1st, was perhaps drier than this year, as we had a great deal of rain this year in August and September.

EFFECT ON GROWTH OF STOCK

The dry weather, coming as early in the season as it did, was extremely hard on spring-planted stock, such as apple grafts and seedling. Where the ground was not in perfect shape at planting time, the loss was very heavy. The shrinkage was so great, that some blocks of grafts and seedlings were plowed up and the stand on many others was quite poor. This poor preparation of the soil in the spring was noticed throughout the season. As the ground dried deeper and deeper, stocks began to die on this coarse pebbly ground, and continued to do so until the rains came in August.

We found it a very great advantage to follow "Campbell's Dry Farming Methods throughout the Year." Shallow cultivation and a dust mulch was the watchword. Although it seemed we were doing nothing but stirring up the dust, we found we got good results in conserving moisture, by going over our fields once every four to six days. By this method of cultivation, we were able to keep stock alive and growing slowly until the rains came. Since the first of August, all kinds of stock have made a marvelous growth. We had excellent growing weather, throughout August and September, and stock made quite a little growth during the early days of this month. Apple seedling and apple grafts in our immediate vicinity are above normal for growth.

TRADE CONDITIONS

The demand for Apple seedling has been unusually heavy thus far, many growers being sold out, and buying to fill orders at this time. No trouble to sell apple trees at top prices. We have turned down many orders for early fall shipment, on account of stock being too green. The call for peach is very good, and we are surprised to see the cherry tree market picking up as it has.

The above represents conditions in the Kansas River valley and immediate vicinity. Since the writer, E. R. Taylor, bought out the other members of our firm at the end of last year's business, he has been too busy to do much visiting with the nurserymen at any distance from home.

Topeka, Kans.

L. R. TAYLOR & SONS.

THE VALUE OF FUMIGANTS IN COMMERCE

By GERALD McCARTHY

Many forms of diseases and insect parasites have been distributed far and wide by fast trains and steamships, thus infecting territories which otherwise they would not have reached. The ticks carrying the germs of Texas fever, and those infected with spotted fever have been transported in infected stock cars, while steamships have carried the mosquitoes which transmit yellow and malarial fevers from southern to northern parts. Recently the plague has been introduced into San Francisco, and also into English ports, by ships from the Orient. The rat is the common carrier of the plague, and fleas transport the disease from rats to humans. Obviously the best remedy is one which will kill both the rat and the flea, and for such use only a gas is practicable.

There are three substances more or less commonly used as fumigants: 1. Hydrocyanic (Prussic) acid gas; 2. Sulphurous gas; and 3. Carbon bi-sulphide.

Of these, the last is too dangerous, being very inflammable and explosive, for use where there is fire or light. The second is slow in action, does not penetrate well, discolors paints and fabrics, and reacts upon metals. The first named is prompt and powerful in its action, possesses extremely great penetrating power, and is not likely to explode or ignite. It is of special value in cleansing ships from southern and oriental ports of such vermin as bed bugs, lice, ticks, rats, lizards, white ants, etc. Bedding can be satisfactorily freed from mosquitoes, moths, and other insects by simply piling loosely and fumigating with hydrocyanic acid gas for one hour.

Another important use for hydrocyanic acid gas is freeing fresh apples for export from San José scale. Most European governments now make a rigorous inspection of such fruits before allowing entry, and destroy all that are found infected. Severe losses have been inflicted upon American apple exporters in this way. More than one and one-quarter million barrels of apples are annually exported from the United States. Infected fruit should not be prepared for

export, but for the protection of domestic commerce in fresh fruits, and as a precautionary measure, all such fruits should be fumigated before shipment. The fruit need not be removed from the barrels or boxes, but the barrel head must be temporarily removed, or a few half-inch auger holes bored into it, to admit the gas. Fruits wrapped in paper need not be unwrapped. The best way to fumigate fruit packages, trees and similar objects, is to use a room of suitable size, lined with common, soft building paper, with the edges lapped and glued. The room should be dark. The gas is lighter than air, hence must be placed below the object to be treated. The time required to insure destruction of insects is one hour, but longer exposure will do no harm.

The following formula is recommended: For each 1000 cubic feet of space, Potassium cyanide, 98% pure, 10 ounces; Sulphuric acid, commercial, 10 ounces; Water, cold, free from chlorides, 1½ pints. Directions: Place the water in a glazed pitcher of twice the volume of the formula; slowly add the sulphuric acid, and when all is in, shake the pitcher. Let stand until cooled to about 60 degrees. Weigh out the cyanide and place in a paper bag. When all is ready, drop the bag containing the cyanide into the diluted acid and quickly leave the room. Do not enter the room so long as the odor of bitter almonds persists. If the room is larger than 2000 cubic feet, use one generating vessel for each such unit of space. Be careful in handling the acid; if it should spatter on the hand or clothing, immediately wet the part with ammonia, or a solution of soda.

In preparing this fumigant, be careful to use only the 98% pure potassium cyanide. There is on the market a deceptively labelled article, "American Cyanide," which, in fact, is a soda cyanide. This substance is with difficulty freed from chlorides. Chlorides decompose cyanides, and even one per cent of common salt, sodium chloride, will render a cyanide worthless as a fumigant.

A NEW IDEA

The editorial office of THE NATIONAL NURSERYMAN has recently received a unique pamphlet, illustrating in a pictorial way the views to be found about the residence and in the gardens of Dr. Rudolph Schiffmann, Pasadena, California. One of the interesting features about this is that the grounds, while embracing only six acres, are so ingeniously, skillfully, and artistically arranged, that they convey the impression of much greater area. The photographs are taken after three years of care and culture, and certainly represent extraordinary rapidity of development for that period. The central thought which is paramount in many of the pictures is that of a home. The surroundings are an integral part of the dwelling, and while some thought and attention has been given to developing illustrations of various exotic types of gardening, yet these are so harmoniously blended that they make a complete and satisfactory picture.

The idea of stimulating home building by a series of attractive half tones of this kind is new, but decidedly effective.

HEAVY APPLE RECEIPTS IN PHILADELPHIA

More than a hundred cars of apples were received in Philadelphia during the last week of October. These heavy receipts caused a decline of from fifty to seventy-five cents per barrel. The prevailing prices were from \$2.00 to \$2.50 for Kings, \$2.00 to \$3.00 for Hubbardstons, \$2.50 to \$3.00 for Baldwins, and slightly lower for Greenings.

VARIETIES OF PEACHES FOR ESSEX COUNTY, MASSACHUSETTS

Mr. A. F. Tenny of Essex County, Massachusetts, recommends the following varieties of peaches for that section. They are given approximately in order of ripening: Carman, Hiley, Champion, Mountain Rose, Belle of Georgia, Crawford, Oldmixon, and Kalamazoo. For a late peach, the writer recommends Stevens' Rareripe.

FRUIT AND PLANT NOTES

NEW FRUITS OF VALUE

EVERBEARING STRAWBERRIES

Unusual interest in this type of the strawberry is manifested the present season. A number of varieties exhibiting late fruiting habits have appeared. It is to be remembered that Pan-American, produced by Samuel Cooper, Delevan, New York, and exhibited at the Pan-American Exposition, was one of the pioneers of this type. Among others which are claiming public attention is a variety introduced by Mr. Farmer of Pulaski, New York, and several types being propagated by Gardner and Son, of Osage, Iowa. It is altogether likely that a place will be found for these types in regions where the autumn season is relatively open.

A SAMPLE OF FALL BEARING STRAWBERRIES

Under date of October 26, we received a package of strawberries from Mr. L. J. Farmer of Pulaski, New York. These were samples of the Francis, so called everbearing strawberry. Mr. Farmer says that, "We began picking ripe fruit from these plants on September 10, and they will continue to fruit until the hardest freezing weather. Last year from 500 plants set May first, we gathered during August, September, and October, 400 quarts of berries and sold them to grocers and leading hotels at twenty-five cents per quart. This means that they yielded at the rate of 8000 quarts to the acre, and at this price would net something like \$2,000 per acre."

The berries are of medium size, conical or wedge-shaped, light red, sometimes rather lacking in color. The texture of the specimens received is exceptionally firm, and their keeping quality excellent. In flavor they somewhat resemble forced strawberries, that is, strawberries grown under glass, lacking somewhat the rich, sugary flavor of the summer-grown berry. A berry of this kind at this season of the year is certainly a unique production, and if it can be depended upon to behave itself regularly in the manner described by Mr. Farmer, it should prove not merely a novelty, but a valuable addition to our fruit lists.

EDITOR.

VARIETIES OF PECANS

Sam H. James of Mound, Louisiana, writing in a recent number of the *Rural New-Yorker* recommends Moneymaker as one of the most prolific varieties he is growing. Another heavy yielder with him is Teche. This variety, he says, is superior to Frotseher, but it is certainly very much smaller than Frotseher. Among other varieties recommended are Carman and Van Deman. The latter, he says, is a beautiful nut, but a poor yielder. It might be added that Van Deman is also, as grown in Georgia and Florida, subject to scab to such an extent that orchardists are planting it very sparingly.

PREPOTENCY

As a result of the exhaustive studies of Professor Hansen of Brookings, South Dakota, in the breeding of hardy fruits,

notably plums and raspberries, he states that at the present time he is unable to formulate any law or rule specifying the influence we may expect from either parent on the offspring. There are those among the older school of plant breeders who believed that the pistillate or female parent dominated the constitution and vigor of the plant, while the staminate parent influenced the quality of the fruit. These assertions are not substantiated by Hansen's investigations.

Professor Hansen states that the most promising line of work which he has conducted thus far is in crossing the native sand cherry with the Japanese plums. The result of this cross has been several varieties of plums exceedingly attractive in color, with much of the quality of the Japanese plum inherited, and much of the hardiness of the native sand cherry.

HIGH COLOR IN APPLES IN ENGLAND THE PAST SEASON

The excessively warm weather which visited the European continent and Great Britain during the past season heightened the color of many of the native fruits in a very unusual manner, and we note frequent reference to this in European journals. An American variety of apple, Tompkins County King, which usually, as grown in England, takes on very little color, appeared in its native American dress this season, and greatly astonished the English growers. As grown in New York orchards, it is one of the showiest of our early winter apples. As grown in England, it is usually a dull green with slight bronze tintings. The present season, however, its natural brilliant color has been brought out by the exceptional warm weather, and many expressions of admiration for the beauty of the apple are recorded in connection with exhibits of this variety at the different shows.

ENGLISH APPLES IN HEREFORDSHIRE ORCHARDS

The County of Hereford has long been renowned as one of the noted fruit growing counties of England. John Lindley's description of Herefordshire apples constitutes a valuable contribution to the general subject of pomology. A strong impetus to fruit growing in the County was given by the famous fruit grower, Thomas Andrew Knight, who lived at Wormesley Grange, near the city of Hereford. The County possesses an active fruit growers' association. This organization recently made an exhibit of apples at the Crystal Palace in London. Among the apples exhibited were the following:

Dessert and culinary: Blenheim Orange, Lady Henneker, Nonesuch, Lord Nelson, and the American variety Wealthy. It is interesting to note that this productive variety has found its way into the orchards of England.

Dessert: Baumann's Red Reinette, Cox's Orange Pippin, King of the Pippins, Ribston Pippin, and Worcester Pearmain.

Culinary: Bismarck, a variety of the Alexander type, Warner's King, Wellington, and Yorkshire Beauty.

THE HIMALAYA BLACKBERRY

In response to inquiries in regard to this fruit we are glad to present the following:

I have seen the Himalaya Blackberry once or twice this year, and there is no question about their vigor and hardiness at Holland, Michigan. The time I was there was at the end of a dry spell and the berries were not of good size, altho I imagine that normal weather would make them a very good size. The flavor was good. I am inclined to think that this man has something of more than passing value.

Michigan Agr'l College.

H. J. EUSTACE.

EXHIBITIONS

The horticulturists of England are to engineer an international horticultural exhibition in London in 1912. The Secretary of the exhibition is T. Geoffrey W. Henslow, Westminster Chambers, 7 Victoria Street, London, England. The Royal Horticultural Society has promised a grant of \$5,000.

OREGON APPLE SHOW

This exhibition was held in connection with the meeting of the Oregon State Horticultural Society, Nov. 15-18, 1911, with Mr. J. W. Jeffrey, Commissioner of Horticulture for California, as chief judge. Among the features of the exhibition were contests by the students of the Oregon Agricultural College for judging and also for speaking on horticultural topics. The prize list was extensive and varied.

Among Experiment Station Workers

DOES THE APPLE ORCHARD NEED FERTILIZERS? By F. H. Hall. Popular edition of Bulletin No. 339 of the New York Experiment Station, by Prof. U. P. Hedrick. July, 1911.

It is concluded in this bulletin that "The soil must be of a poor fruit type, indeed, that will not, when properly handled, grow good crops of apples without artificial feeding." It is also stated regarding the experimental applications of fertilizers in an apple orchard during a period of years, that "Considering the apple crops as a whole, there was, practically if not absolutely, no return in any way for the money spent for the fertilizers applied."

A similar statement might not be true in connection with some of the lands in New York State, but the writer believes that there are thousands of acres of fruit lands in the state in which apples can be grown satisfactorily without the application of fertilizer. If so, why should anyone waste money and fertilizer in the attempt to make land grow good apples when it is not naturally fitted for the production of that crop? Professor Hedrick maintains that it is the drainage and tillage of the apple orchard which should be attended to first, after which it may in many cases be found that fertilization is unnecessary.

Apple orchardists both in and out of New York State will find this an interesting bulletin; for while the results found in the Geneva Experiment Station orchards might not be exactly duplicated in many regions, still the statements will give rise to careful observations along this line, will make many look for a definite answer to the question, "Am I burying my money in the ground when I buy fertilizer for my apple orchard?"

THE NATIONAL NURSERYMAN,
Rochester, N. Y.

Enclosed find one dollar for which send us your valuable paper.

We are moving our nursery from Edmond, Okla., to Ada, Okla., where we have much better soil and shipping facilities.

Ada, Okla.,

Yours truly,
OKLAHOMA NURSERY CO.,
T. A. MILSTEAD, Mgr.

Legislation

South Carolina has instituted a law requiring the inspection of all nurseries on and after November first, 1911. The inspection will be under the direction of the State Entomologist.

NURSERY INSPECTION IN FLORIDA

The State of Florida has recently enacted a state inspection law, comprehensive and in many respects stringent. The inspection law provides for the appointment of a board of control and a chief inspector of nursery stock. The board of control consists of five members, mostly fruit growers of the state. The chief inspector is Dr. E. W. Berger, formerly entomologist of the Florida Experiment Station. The board has met and placed under the ban the following classes of insects; white flies, scale insects, Mexican and Mediterranean fruit flies, the cotton boll weevil, and the mango seed weevil. The diseases root knots of peach, fig, and grape, are especially barred, and blight and crown gall of the apple, pear, and peach are also in the black list.

The act provides that no stock grown within the State shall be sold, exchanged, or given away, unless inspected and accompanied by a certificate. All shipments into the State shall be made in securely closed boxes or if in carload lots, in properly closed cars. The act provides for the fumigation of all fruit stocks with hydrocyanic acid gas. It also provides that firms or corporations handling stock grown outside of the State shall pay a fee of \$5.00 per annum. A general inspection fee of \$5.00 is charged for each nursery, and a further fee of twenty-five cents for each acre of nursery stock inspected. In addition, the nurseryman is to pay the traveling expenses of the inspectors.

TO THE NURSERYMEN OF FLORIDA AND OTHERS INTERESTED:

Having been appointed by the Governor of the State of Florida to the position of Inspector of Nursery Stock, I take this opportunity to address you and to assure you of the cordial intentions of those entrusted with the administration of the law governing the sale, exchange, and transportation of nursery stock. Since the law establishing this work was drawn up by the Nurserymen of Florida and supported by them, it naturally follows that the Inspector of Nursery Stock looks forward to a friendly and most hearty co-operation on the part of the Nurserymen and all others interested; the kind of co-operation that he expects to give and that he believes the law implies. Let our mutual motto be: The Cleanest and Best Nursery Stock in the World; free from insects and diseases.

The Act, Chapter 6156, Laws of Florida, 1911, together with the Rules and Regulations as adopted by the Board of Control, will be published in pamphlet form and ready for distribution by the middle of September, and will be sent to all who receive this circular and to others interested.

Gainesville, Fla.

E. W. BERGER,
Inspector of Nursery Stock

NATIONAL NURSERYMAN PUB. CO.,

We enclose our check for \$2.00 to pay for our one inch advertisement in your November issue. We have already received replies from this.

Bloomington, Ill.

Yours very truly,
STANDARD PECAN CO.,
R. M. NICHOLSON.

The National Nurseryman

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AWARDED THE GRAND PRIZE AT PARIS EXPOSITION, 1900

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Correspondence from all points and articles of interest to nurserymen and horticulturists are cordially solicited.

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ROCHESTER, N. Y., DECEMBER, 1911.

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Western Association of Nurserymen—President, Geo. A. Marshall, Arlington, Nebr.; secretary-treasurer, E. J. Holman, Leavenworth, Kan. Meets annually second Wednesday in December.

THE YEAR 1911

Plantsmen will long remember the year just passing out as one characterized by remarkable climatic extremes and exceptionally high temperatures, especially throughout the northeastern and central states. There are few misfortunes without their accompanying compensating factors. In this case, the unusual heat gave us exceptionally high colored fruit. Of course, this also means that it gave us fruit with reduced keeping quality. The droughts of early summer checked the growth of nursery stock, while emphasizing the benefits of thorough tillage. No season in recent years has brought out the value of the soil mulch in the nursery row more emphatically than that of 1911. Notwithstanding excellent care in most places, the outlook about midsummer was very unpromising in many parts of the country. With the return of precipitation in late summer, came renewed growth and a marked change on the face of nature. Stock made up rapidly, and by the end of the season a great deal of the injury and promised shortage of the forepart of the season had been repaired. Now, at the close of the year, we may say it was a prosperous one for the nurserymen of the country. Industry and intelligence have been rewarded in the main. Let us then approach the new year with courage and strong resolution to improve our condition, and a keen ambition to profit by past experience.

IMPORTATIONS FROM CHINA

It is well known among the better informed plantsmen that we owe a great deal to Oriental countries for providing us with many attractive ornamentals and many desirable fruit producing plants. It is not generally known that it has been the custom for many years of some of the older and better established plant firms in Britain and Europe to send explorers regularly into foreign countries, for the purpose of seeking out the desirable and promising among the denizens of the field and forest.

Our information and knowledge on this subject has been very much enlarged recently by an address before the Horticultural Club of Boston by the noted Chinese explorer, E. H. Wilson, who has recently returned from an extended trip to China on behalf of the Arnold Arboretum. Mr. Wilson first became prominent as a plant explorer when representing the noted nursery firm of James Veitch & Sons, London, England. He traveled extensively in China and Japan for this firm and brought over many valuable and attractive plants. As proof of this, the Royal Horticultural Society has given plants which have come to the Occident through its agency more than sixty awards of merit, including six gold medals. This is indicative of the quality of the material collected.

It is worthy in this connection to note that the Arnold Arboretum was instrumental in introducing that most popular of hedge plants at the present time, *Berberis Thunbergii*. It also introduced *Azalea Kaempferi*. The introduction of these two plants alone is enough to justify the existence of an institution of that kind.

Among the herbaceous plants Mr. Wilson specially recommends are:

"*Astilbe grandis* (5 to 6 ft. tall, flowers pure white),
Senecio elivorum (4 to 6 ft. tall, rich golden-yellow flowers),

Primula pulverulenta (flowers rich crimson on scapes 3 to 4 ft. high), *Artemisia lactiflora* (3 to 4 ft. tall, flowers milk white), *Aconitum Wilsonii* 6 to 7 ft. tall, flowers deep blue, opening in September), *Paeonia Veitchii* (2½ to 4 ft., flowers deep red). Here are my six herbaceous plants, every one of them perfectly hardy here in Boston, strong growing, free-flowering and vigorous in habit."

Among other introductions mentioned by Mr. Wilson, are certain conifers from western China, of which he expects a great deal. These are:

Abies recurvata, *Abies Fargesii*, *Picea complanata*, *Picea purpurea*, *Pinus Wilsonii* and *Pinus Armandii*.

Of rhododendrons, Mr. Wilson states that more than 150 species are known in China, and nearly a hundred are in cultivation. These vary from low shrubs to trees fifty feet or more in height. Among other plants imported, are lilies, flowering shrubs, climbers, broad-leaved evergreens, hardy orchids, and greenhouse plants. It is understood that arrangements are being made whereby this large collection will be available to the trade. It is hoped that something in the way of a definite descriptive catalogue will be issued before very long, so that plantmen may be accurately informed in regard to these apparently valuable importations.

THE TRAINED NURSERY- MAN

The business of the nurserymen of today demands a fine combination of scientific attainments and practical knowledge, coupled with keen business ability. This is the ideal qualification. It goes without saying that it does not occur very often in one individual. Frequently the scientifically equipped man makes a melancholy failure of the nursery business on the practical side. Not infrequently, on the other hand, the man who is trained solely in the school of practical experience falls into grievous error through lack of the fundamentals of the natural sciences. We have in our mind's eye, however, examples of signal successes made by teachers and investigators who have forsaken their chosen calling and taken up the lines of the nurseryman. One of these is the case of a man who made a success as a teacher of horticulture and botany for a number of years, now an equally successful manager of a large nursery; another, a successful experiment station investigator taking the managership of one of the most important fruit exchanges in the country; another, the case of a successful college chemist becoming an equally successful nurseryman. And so on. Many such examples might be cited. Of course it goes without saying that the man who makes a notable success of his department in a college is much more likely to achieve success in the field of practical affairs than the man of mediocre college attainments.

However much scientific training a man may have, he is not likely to achieve striking success if he has not had a reasonable amount of practical experience. In this respect, the farm boy has much better natural equipment for the general activities of life than the city boy. The practical and the theoretical, meaning by the latter the understanding of principles, are essential to success in the business and professional life of the plantsman.

We are glad to note the tendency among nurserymen to patronize state colleges of agriculture. The fact that the professors in these schools might not be able, if put to the test, to set as many grafts or buds in a day as the nurserymen's sons themselves does not affect the issue materially. The nurseryman needs a liberal education in the natural sciences. Such an education will tend to make him independent and resourceful. He should be acquainted with the fundamentals of botany, of entomology, of organic chemistry, economic geology, and physics. These are all germane and important to his life work, and these are all additional to a general knowledge of horticultural and agricultural subjects and studies.

It has been our privilege for the past twenty years to note the progress of the trained worker, as against the untrained, and it has been an increasing source of satisfaction to observe that, as a rule, the race is won by the owner of the trained mind and hand. In the rising generation of nurserymen, there are many who have had the advantages of present day advances in agricultural education. The careers of these men will be watched with deep interest. They are to a considerable extent marked men. It is hoped that they will make good. We are confident in the majority of cases that they will justify their training; for if the nurseryman is to occupy in the future the important place he has held in the past, it can only be done through a study of the science as well as the art of horticulture.

INTEREST IN NUT CULTURE

The growth of interest in the culture of native and introduced nuts shown by nurserymen and fruit growers in recent years has been very remarkable. The National Nut Growers' Association, an organization national in name, but somewhat provincial in scope and operation, was organized a few years ago, and has done excellent work in promoting the development of pecan culture in the Gulf States and the Southwest. It is not generally known that a similar organization, whose purpose is to foster the propagation and improvement of hardy varieties of native nuts, was formed in the Northeast last fall. This association is termed the Northern Nut Growers' Association, and was brought into existence largely by the efforts of amateurs interested in nut culture. These men saw in the native hickories, walnuts, butternuts, and chestnuts, the foundation of valuable food products. They realized that these forms, having been developed in the somewhat rigorous climate of the North, were likely to possess, therefore, the innate and important fundamental qualities.

Chief among the promoters of this society are two eminent medical men of New York City. Dr. Robert T. Morris, noted surgeon, has for a number of years been recognized as an authority on native nuts. He has experimented very extensively on his Connecticut farm. These experiments have covered the testing of all the improved varieties of native and introduced nuts that could be grown in that locality. He has spent much time in experiments on methods of propagation, and his labors on the crossing of different forms, with a view of producing something better than we already possess, have been in progress for several

years. These private experiments of Doctor Morris are bound to bring results of great value to the country at large. Doctor Morris, although an exceedingly busy man professionally, has accepted the presidency of the Northern Nut Growers' Association. The society has also been fortunate in securing the active assistance of Dr. W. C. Deming, of Westchester, New York, another physician who, for a number of years, has been keenly interested in the food problems of the country, as affected by our native and introduced nut products. Doctor Deming is secretary of this society.

The next meeting of the Association will be held at the New York State College of Agriculture, Ithaca, Dec. 14 and 15. At this meeting, the samples of native nuts for which Doctor Morris has offered prizes, will be examined and the prizes awarded. A considerable number of thin shelled hickories, hardy Persian walnuts, and improved forms of black walnuts and butternuts have been already received. These will form an exceedingly interesting and valuable collection. This competition is open to all persons, and there is no entry fee. Those who have on their farms or in their vicinity especially good types of native nuts should select twelve specimens and send them to the Department of Horticulture, College of Agriculture, Ithaca, N. Y., with a description of the tree and notes on its history. All these samples will receive careful attention. Worthy ones will be recommended for propagation.

Membership in this Northern Nut Growers' Association is open to all persons interested in horticulture in general, and nut culture in particular. Secretary Deming would be glad to receive applications. An attractive program has been provided for the forthcoming meeting, which, it is expected, will bring together a considerable body of the leading nut growers throughout the Northeast.

FRUIT PLANTINGS IN WASHINGTON

Seven counties in eastern Washington have under cultivation 6,930,389 apple, 1,251,735 peach, 743,963 pear, 207,018 cherry, 182,931 prune and plum and 94,873 apricot trees, according to reports compiled by F. A. Huntley, state commissioner of horticulture. Walla Walla, Stevens and Benton counties, in which the count is not yet completed, it is estimated, will bring the number of apple trees to fully 10,000,000, a full crop from which would mean about 70,000,000 boxes or more than the total apple production in the United States in 1910.

Commissioner Huntley reports this acreage: Apples, 126,116; peaches, 11,590; pears, 6,888; cherries, 1,916; prunes and plums, 1,693; apricots, 878. The number of trees in the seven counties follows:

Yakima county, four years and older, apples, 642,032; pears, 247,222; peaches, 416,729; apricots, 6,087; plums and prunes, 18,383; cherries, 16,644. Three years and younger, apples, 1,241,739; pears, 310,506; peaches, 226,065; apricots, 16,632; plums and prunes, 27,262; cherries, 13,989.

Spokane county, four years and older, apples, 595,076; pears, 27,333; peaches, 32,500; plums and prunes, 48,373; cherries, 46,304. Three years and younger, apples, 1,299,805; pears, 6,902; peaches, 6,704; plums and prunes, 942; cherries, 9,834.

Chelan county, four years and older trees, apples, 578,388; pears, 42,744; peaches, 122,969; apricots, 20,172; plums and prunes, 10,570; cherries, 30,134. Three years old and younger trees, apples, 1,243,193; pears, 50,622; peaches, 52,022; apricots, 20,569; plums and prunes, 4,951; cherries, 14,188.

Okanogan county, four years and older, apples, 158,667; pears, 3,675; peaches, 6,753; apricots, 1,450; plums and prunes, 5,285; cherries, 2,800. Three years and younger, apples, 689,868; pears,

12,480; peaches, 38,300; apricots, 10,413; plums and prunes, 6,486; cherries, 11,457.

Asotin county, four years and older trees, apples, 38,272; pears, 1,750; peaches, 129,742; apricots, 2,279; plums and prunes, 3,493; cherries, 39,200. Three years old apples and younger, 85,864; pears, 12,600; peaches, 47,783; apricots, 3,143; plums and prunes, 12,741; cherries, 1,229.

Whitman county, four years and older, apples, 106,750; pears, 1,145; peaches, 68,750; apricots, 2,880; plums and prunes, 25,550; cherries, 5,955. Three years and younger, apples, 19,544; pears, 7,313; peaches, 25,138; apricots, 3,715; plums and prunes, 14,235; cherries, 6,720.

Douglas county, four years and older trees, apples, 14,862; pears, 4,902; peaches, 4,056; apricots, 1,046; plums and prunes, 1,041; cherries, 2,106. Three years and younger, apples, 222,329; pears, 14,771; peaches, 28,242; apricots, 6,487; plums and prunes, 2,519; cherries, 6,458.

There are numerous large commercial apple orchards in Walla Walla, Stevens and Benton counties. One community project in Stevens county already has planted more than 350,000 two and three years' old trees and when completed there will be 1,250,000 trees on the 18,000 acres.

THE SCHLEY PECAN

We are in receipt of nuts of this promising variety, sent us by Mr. Claude Delmas, of A. G. Delmas' Sons, Pascagoula, Mississippi. We have known and appreciated the value of this nut for some time. It has an interesting history. The variety is a seedling of the Stuart, one of the best known and most widely planted of all the propagated pecans. It appears that Mr. A. G. Delmas, Scranton, Mississippi, secured nuts from the original Stuart tree, grown at Pascagoula, and planted them at Scranton, Mississippi, in 1881, where the original tree of the Schley still stands. Mr. Delmas was always an enthusiast in pecan culture, and was instrumental in originating a number of new varieties. This variety he always thought the best of all his seedlings. He named it Schley in 1898, and began propagating it by topgrafting in 1900. A couple of years later, Mr. D. L. Pearson of Monticello, Florida, secured scions from the original tree, and introduced it under the name of Admiral Schley. This, of course, was infringing on the originator's privilege and rights. Mr. W. A. Taylor of the Department of Agriculture calls attention to this in his description of the variety in the Yearbook for 1905, and relegates Admiral Schley to the position of a synonym under the name Schley. This variety is now one of the most widely planted of all the better known pecans.

The nut is of good size, oblong obovate in form, with conical and somewhat sharply pointed apex. It is an attractive golden brown in color, but the striking feature about the variety is its thinness of shell, which enables one to crack them by hand with perfect ease. Not only does it crack easily, but the partitions separate very readily from the kernel, which is long, slender, and brightly attractive. It is probably the easiest cracking of all the pecans. The texture is fine grained, and flavor exceptionally sweet and rich. Quality is rated very good.

Taylor points out that while the thinness of shell and its attractive color and fine quality of the nut give it a high place as a dessert pecan, the slenderness of the kernel "is objectionable from the confectioner's standpoint." It seems to us that this variety is too fine in quality to be sold through the confectioner, and is really a table nut, and should be disposed of to the consumer in the shell.

The reputation of the variety as a bearer is variable. Complaints of shy bearing are noted here and there, and variability in size and form is also charged against the variety. The tree is a fair, but rather slender, grower. The original tree, then twenty-five years of age, bore one hundred twenty-five pounds of nuts in 1905. Schley is being extensively planted in South Georgia and in North Florida.

"We are well pleased with the paper and wish to renew for another year."

Canandaigua, N. Y.

BACON BROS.

THE DEPARTMENT STORE AND THE NURSRYMEN

A CRITICISM AND A REJOINDER

EDITOR NATIONAL NURSERYMAN:

I have read with much interest the article under above heading in your August number, written by Mr. R. H. Smith, and if the space in your paper permits, would like to have my views on this subject set forth.

The problem of how to have the department stores stop selling nursery stock is a very difficult one, and has often been discussed between the writer and some of the largest nurserymen in this country.

NURSERY STOCK AS SOLD BY DEPARTMENT STORES

I admit, the way department stores sell and handle nursery stock is a very poor one. Where they take pride in handling only the best grades of goods in other branches, they do not hesitate to sell the poorest grade of plants in the poorest way possible. They do not try to obtain the best stock they can, nor to obtain a price equal to the value. Judging from the above, it would look as if department stores are not the best places to buy, and I have often wondered if they use the same policy in handling dry goods, etc.

CAN DEPARTMENT STORES BE PREVENTED FROM SELLING TREES AND SHRUBS?

The question now is, how to make department stores stop selling trees and shrubs.

This question is not easy to answer, as too many complications arise.

In the first place: ARE DEPARTMENT STORES ENTITLED TO SELL NURSERY STOCK?

From one point of view, I think they are. They form a combination of retailers in every line of merchandise from dry goods to groceries, etc., and therefore, I do not know why they should not sell nursery products, if they can handle them properly. But they should not sell the more perishable class of these goods, if they have not the necessary facilities. Bulbs, seeds, and pot plants can easily be sold from a counter but this cannot be done with shrubs and rose bushes, rhododendrons and the like. These need careful and skilful handling. A well ventilated storage cellar and a space of ground to heel them in are indispensable. This costs labor and money which makes expenses too high to sell them at the price they get for them. Lacking these facilities, department stores cannot sell this stock satisfactorily, even if they buy the best stock obtainable. For this reason, I think department stores should not handle nursery stock.

One big department store states on their wrapping paper and bags: "Our interest doesn't end with the making of a sale. We want to know to a certainty that the goods turn out alright. We are never satisfied with a transaction until the customer is more than satisfied."

I wonder if they could stand for the satisfaction their rosebushes give their customers.

But on the other hand, where they are dealers in all classes of merchandise, they are entitled to trade in nursery

stock. And if this is right, then nurserymen, including the Hollanders, may sell to them their stock.

2. WHERE DO THESE STORES GET THEIR STOCK?

All articles written about this subject accuse the Dutchman alone of selling to department stores. He is blamed for all the evil.

This is entirely unjust. Aside from the Hollander, there are a great number of American nurserymen who sell to department stores. I know of one department store that told a Dutch traveller that they bought their stock now from a nurseryman in the city, because they could return all that remained unsold and in this way had no losses. This is quite acceptable from the store's point of view, but is it right to sell to department stores on these conditions, when it is not the custom to sell to a fellow nurseryman in the same way?

Besides the Dutchman and the American nurseryman, there are the dealers who buy stock for the purpose of selling to department stores. Then, there are the florists who supply them every morning with fresh cut flowers and pot plants; further, seedsmen selling them seeds and bulbs. All these contribute to the much-despised evil, and it will be hard to say who does the most harm.

And, while not all nurserymen, florists, dealers, and seedsmen sell to them, neither do all Dutchmen try to get department store orders. I know several Boskoop firms that do not cater to that class of business.

The third question that arises is: DO ONLY DEPARTMENT STORES SELL INFERIOR AND POORLY HANDLED STUFF?

There are in some cities other dealers who try to copy this system, and do it just as poorly.

DISCONTINUE YOUR PATRONAGE OF THESE STORES

Now, if this dealing should be stopped, I think the way Mr. Smith suggests is not the most practicable, as it is impossible to know and boycott all who sell to department stores. The best and only way is to prevent department stores from selling these goods. How this can be effected, I do not exactly know, but I think if the American Association of Nurserymen and the American Florists' Association could get together and boycott the department stores that handled nursery stock, this would give better results than to boycott the dealer for selling them.

If I am not mistaken, this system was also applied by French nurserymen against the sale of nursery stock by the big Paris department stores. But these stores handled to a large extent florists' supplies, like ribbons, etc., which the florists refused to buy from them as long as they sold nursery stock and cut flowers, and their petition had, therefore, a strong support.

I hope others will also give their views on this subject. It may be that little can be done to stop this business, but if it is necessary that something be done, I assure you that a great number of Hollanders will be glad to co-operate with you. They generally, "sit up and take notice."

Boskoop, Holland

J. DYKHUIS.

NOTE AND COMMENT

INTERESTING FEATURES AT HOME AND ABROAD

THE APPLE CROP OF 1911

An estimate of the apple yield for the year 1911 has been made by the *American Agriculturist* and the crop is placed at thirty million barrels. This is a fifth larger than the yield for 1910 or 1909.

WALNUT CULTURE TO BE INVESTIGATED

The California Walnut Growers' Association has decided to send a representative to Europe to study conditions of walnut culture there, and make such recommendations as he may deem wise for the improvement of the industry in California. Not only will the orchard management side be studied but the economic aspects will receive consideration also. Mr. Hazzard, President of the Walnut Growers' Association, is to leave for Europe before long to begin the investigation.

NOVA SCOTIA APPLE CROP

The Province of Nova Scotia comes to the front this year with an exceptionally large yield of its own characteristic varieties. It is credited with a million barrel crop, a considerable proportion of which is Gravenstein, Nonpareil (Roxbury Russet), Spy, Baldwin, and the like.

UNSEASONABLE WEATHER IN CENTRAL GEORGIA

Authentic advices from Central Georgia indicate that the warm weather of the latter part of October and early part of November acted most disastrously upon the large peach plantings of that section. The effect of the excessive warmth was to bring the peaches into bloom, and it is reported in the vicinity of Americus and Fort Valley that great areas of the peach orchards were in full blossom the first days of November. This, of course, means that there will be no peach crop or at least a very scattering one the coming season on all trees which have been affected in this way.

ROOT-GALL

Mr. E. A. Smith, vice-president of the Jewell Nursery Company of Lake City, Minnesota, presents an interesting discussion of root-gall on various types of trees in the November issue of the *Minnesota Horticulturist*. The paper is illustrated with photographs of trees planted with and without root galls, and the whole thing is an interesting contribution to our knowledge of this subject. Mr. Smith is chairman of the committee in charge of these investigations on behalf of the American Association of Nurserymen. His report at the last meeting of that Association was exhaustive and valuable.

EUROPEAN APPLE CROP

It is reported that France will have a large apple crop this year. England is also credited with an unusually full supply. It is probable that this will cut down the demand to some extent for American apples.

BAGGING FRUIT

The fruit growing of the Old World, as viewed by the American visitor, is of a distinctly amateurish type. This is the first impression which the visitor from this land of commercial orcharding is apt to receive. On the other hand, if he studies the situation with some care, he will find that there are a good many practices which at the first blush seem amateurish that might be adapted with considerable advantage under our American conditions. As an instance, we might cite the practice of bagging fruit to protect from such enemies as birds, insects, and fungous diseases. This practice is relatively new in this country, and as a matter of fact has been confined exclusively to high grade grape culture, while it is one that has long been in vogue in Europe and Japan.

In Britain and on the Continent, in the gardens of the well-to-do, a great proportion of the tree fruits are trained on walls and on trellises. In these cases, all the large fruits, as apples, pears, and peaches, are bagged in the interests of thorough preservation from injurious agents. When visiting the gardens of the National Horticultural School near Versailles, a short distance outside of Paris some time ago, we were greatly impressed by the number of paper sacks which had been used in protecting a crop of Cox Orange Pippin and White Winter Calville apples trained on walls and approaching maturity at the time of our visit. We were told that these single apples would fetch a franc apiece on the Paris market. In other words, they were hand cultured and absolutely free from blemish. It is the common practice also to bag peaches grown in fruit forcing houses in England. In Japan the bagging of peaches where trees are grown on walls or in the orchard is quite common, and in some places universal. It is regarded as a necessary protection against fungi and insects. By this method all fruit left after the final thinning is covered with a small paper bag made of strong Japanese paper. The bags are provided with small holes in the corners to let out rain water freely. In some cases, paper which is especially treated with an antiseptic substance is employed. In these instances, the bags may be used for more than one year. Peaches are covered with the sacks at quite an early stage in their development. The Japanese claim that the skin remains thin and delicate and that the fruits are larger and more uniform in size. In Japan the paper bags are removed a few days before harvesting, in order to allow the fruit to color as thoroughly as possible. The work of bagging is done exclusively by women, and a quick operator can put on 1500 to 2000 bags a day. The bag is attached either by tying the mouth with twine or with fine zinc or copper wire.

In this country, a few grape growers have made a success of bagging grapes, but even in this instance the practice has not been carried to any considerable extent.

Standard Nursery Co. of Tennessee says, "We are sending you 'one back' subscription price for your magazine for one year. Place our name on your book and let the good news come along."

OUR QUIZ COLUMN

THE BEST INFORMATION ON PRACTICAL QUESTIONS

WINTER STORAGE OF PEACH TREES

A correspondent asks for an expression of opinion and experience on the relative advantages of cellar and field storage for peach trees.

A. We do not think there is any better way in the world to keep peach trees through the winter than properly heeled in, in trenches outside with covered tops.

Painesville, Ohio. THE STORRS & HARRISON CO.

B. "Will peach trees winter better stored in trenches out of doors, covering the tops, or corded up in storage houses?"

In answer we beg to say that years ago, before we had any storage houses we handled peaches out of doors, and generally with satisfactory results. In recent years we have stored indoors, and generally with satisfactory results. With us peaches sorted inside can be handled and shipped earlier in the spring than those heeled in outside, which, of course, is a decided advantage.

Rochester, N. Y. CHASE BROTHERS COMPANY.

C. We have never tried trenching our peaches out of doors over winter. We know that the climate here in Western New York is too severe for that. The tops would be killed back though possibly not so far but that the trees could be properly pruned for planting, after which they would come out all right. Cellar storage is practiced in this part of the country, but peach trees should not be corded up simply with moss or excelsior about the roots. Such treatment would be fatal to them. They should be heeled in, in sand. There would be no objection to cording them up if the roots were all just as carefully covered with moist sand as if standing in trenches indoors. The conditions should be made as nearly natural as possible. No possible objection could be offered to trees handled in this way. The only difference between this plan and trenching them outdoors is that the cellar-storage protects the tops from being winter-killed. The mold in the tops and the dying-back of the wood in the cellar, about which you hear occasional complaints, is the result of either too early digging or too late digging, and lack of attention to the question of proper ventilation of the cellars during the winter months. It is the penalty that carelessness must pay.

Newark, N. Y. JACKSON & PERKINS COMPANY,
JOHN WATSON, Secretary.

WINTER STORAGE OF SHRUBS

The following interesting letter was written in answer to a correspondent's query regarding the Meehan method of storing shrubs:

Our storage cellars are built about the same as the storage cellars of other nurserymen. We have one storage cellar built of wood, with three dead air compartments in the walls.

We have just completed a new storage cellar, the same size as the old one, but this we built of Natco hollow tile, giv-

ing two air spaces in the cellar wall; and from our inspection of other buildings built of this tile, we believe this superior to anything else for this purpose.

The interior of our storage cellar is divided into compartments or bins. The shrubs are tied in bundles of five each for convenience in handling. The bundles are laid in the bins in layers, and the roots of every layer thoroughly buried in sand, the front of the bins being closed up with boards as the bins are filled. By this method, we have a solid bin of shrubs with roots buried in damp sand, making evaporation impossible. We never have any mold or dampness in our storage cellars as we have open air shafts in the roof, so that there is a thorough current of air circulating through the building at all times.

By reason of the fact that the roots of the plants are all buried in damp sand, it does not make any difference if we have a little freezing in the cellar, as that aids in purifying the air and avoiding dampness and mold—in fact, we prefer to have a little frost in our cellars on this account.

We can take shrubs out of our cellars the first of June and have them in perfectly dormant condition, with both roots and tops perfectly fresh, on planting them out, we usually secure a ninety-five per cent stand.

Dresher, Pa. THOMAS MEEHAN & SONS,
THOMAS B. MEEHAN.

PROPAGATING CATALPA BUNGEI

Messrs. West Brothers, Damascus, Ohio, ask how *Catalpa Bungei* is propagated.

Your inquiry on methods of propagating *Catalpa Bungei* was answered in our issue of August, 1910, p. 694, by Messrs. W. & T. Smith Co., of Geneva, who make a specialty of this ornamental. They say that it is grafted on straight stems, 5-6 feet high. Stems are secured by cutting down severely for at least two years until they throw up a strong leader. The scion is inserted with the side or lip grafted firmly tied in and covered with grafting wax. The best time for grafting is about the first of May, when the buds begin to start and the weather is warm enough to work the wax. Of course, only dormant buds are used. This is important.

Thomas Meehan & Sons in the same issue say that their practice is to graft when the buds of the stock have broken and made from one-quarter to one-half inch of growth. They use the side grafting method.

EDITOR.

BOOKS ON PROPAGATION AND PLANT BREEDING

S. Nischizaki, Corvallis, Ore., asks for a list of books on these subjects.

We have pleasure in recommending the following books on propagation of plants and plant breeding:

The Nursery Book, Bailey, The Macmillan Co., price, \$1.25, is a first rate compendium of information on the propagation of indoor as well as outdoor plants, trees, and shrubs.

Another work with the same title is published by the Orange Judd Co. and written by Fuller. Price, \$1.00. This is not quite as full on certain aspects of nursery work as the former volume. Nevertheless, it is an excellent reference.

Plant Breeding, Bailey, The Macmillan Co., \$1.25, discusses the practical and theoretical phases of plant breeding in a satisfactory manner. It also describes the technicality of the operation.

Plant Breeding, Hugo DeVries, Open Court Pub. Co., \$1.50, covers practically the same ground, and is a worthy work.

THE BEST WAY TO RIPEN PEACH AND APPLE STOCK IN NURSERY

A correspondent wishes to know whether any nurseryman has discovered a means of hastening the ripening of peach and apple wood by the employment of any method other than the management of the soil. Can the growth be safely and properly checked by the use of copper salt sprays? Will any nurseryman having experience in this give our correspondent the benefit of his practice? Who will answer?

Obituary

DEATH OF WM. H. MOON

A well known figure in nursery circles passes away at his home in Morrisville, Pa., suddenly on November 18th.
Buried on November 22nd.

William H. Moon was born March 6th, 1849, himself, the son of Mahlon Moon, a pioneer Nurseryman of Pennsylvania. His early education was received at private and boarding schools, finishing with a course at business college, after which his desire ran to a banking career, but he was persuaded from this by his father and he entered the nursery business in which he pushed forward from the first.

In 1872, he engaged in business for himself, purchasing a farm of 100 acres, using 20 acres for his nursery purposes and renting the remaining portion to a farmer. From the first as had been the case with his father, he devoted most of his attention to the growing of ornamental trees and was always a believer in the policy that it was better to produce carefully grown stock to be sold at a good price than inferior stock to sell at a low price. He was therefore, always an advocate of high prices for nursery stock, believing that the nurseryman was entitled to a good living and profit for his labors.

He was one of the early extensive growers of Evergreens and at the time of his death was perhaps one of the largest growers of Evergreens in the country.

In 1890, he incorporated his business taking in with him his brother James M. Moon. His business grew steadily from the first and at the time of his death the nursery had extended in area until it covered nearly or all of five farms approximating 500 acres, all the land being located in one solid block.

Mr. Moon was active in affairs outside of his business, both in his home community and in the National Association. He was the founder and an active member of the Pennsylvania Nurserymen's Association; he was also a member of the National Nurserymen's Association, The Ornamental Grower's Association, The American Academy of Political Science,

and The American Geographical Association. He was the President and a very active member of one of the most flourishing Libraries in Eastern Pennsylvania and was also interested in the Pocono Manor Association which is developing a large tract to form a summer colony in the Pocono Mountains in Pennsylvania where he had a summer home. At the time of his death he was a Director of the Yardley National Bank.

Wm. H. Moon was the fourth descendent of the Moon family to be interested in Horticulture. His grandfather and



WILLIAM H. MOON

great grandfather were prominent in their home communities and deeply interested in growing and disposing of stock in a small way. There are books and receipts still held by the family of trees being sold as early as 1759. Several trees in one of these early orchards are still in good condition within seven miles of the present nurseries.

Mr. Moon is survived by four children, two daughters and two sons, who have been associated with him in his business and will carry on his work as before. Mrs. Moon died in July last.

Mr. Moon was for many years well known and a highly appreciated member of the American Association of Nurserymen. He was the personification of genial good nature. He was broad minded and progressive and the loss to his community as well as to national nursery interests is great. It is most gratifying to know that the policies and traditions of the company will be continued by his sons and daughters.

F. A. MILLER

We are apprised, as the journal goes to press, of the death of F. A. Miller of Fruitvale, California, which occurred on November 18. As in the case of Mr. Moon, it appears that death came very suddenly. Mr. Miller was a resident of San Francisco until a short time since, when he moved to Fruitvale. He was one of the oldest dealers in tree seeds on the Pacific Coast, and was a man well recognized for his sterling honesty and uprightness of character. His sudden death will be greatly regretted by his many friends in the seed trade throughout the country.

Doings of Societies

IOWA

The Northeastern Iowa Horticultural Society held a three day meeting the middle of November, with a program full of interesting subjects which were discussed, after having been treated by well known speakers from the Middle West. This society is now entering upon its twenty-seventh year. The President is G. D. Black of Independence, and the Secretary, Charles F. Gardner of Osage.

NEW YORK STATE VEGETABLE GROWERS' ASSOCIATION

The Secretary of this Association, Mr. Paul Work of Ithaca, is already making plans for the forthcoming winter meeting. He has also arranged with various experiment stations for copies of special bulletins on vegetable culture, to be sent to the members of the Association. The annual meeting of the Society will be held at Ithaca, New York State College of Agriculture, during the week of February 19, 1912.

VERMONT FRUIT GROWERS

The Vermont State Horticultural Society met at Montpelier, Nov. 1, 2, and 3. Among the subjects discussed were Developing Apple Orchards, Nutrition of the Apple Tree, Practical Plant Breeding, Principal Fruit Growing Regions of the East, and Adaptation of Apple Varieties. Among the out-of-state speakers were Prof. F. C. Sears, Massachusetts Agricultural College, Dr. J. K. Shaw, Massachusetts Experiment Station, and M. C. Burritt, United States Department of Agriculture.

NORTHERN NUT GROWERS' ASSOCIATION

The second annual meeting of this society will be held in Ithaca, N. Y., at the New York State College of Agriculture on Dec 14-15, 1911. An interesting program covering culture and varieties of nut trees, their insect and fungous enemies, has been arranged. President, Dr. Robert T. Morris, New York; secretary, Dr. W. C. Deming, Westchester, N. Y.

PROMINENT FRUIT GROWER CANDIDATE FOR NEW YORK ASSEMBLY

Mr. E. C. Gillett of Penn Yan, New York, and for a number of years the well known secretary of the New York State Fruit Growers' Association, accepted the nomination for member of the New York Assembly for Yates County. Mr. Gillett is one of the best known fruit growers in Western New York, and has done a great deal as secretary of the State Fruit Growers to advance orcharding interests. His candidacy was very popular, and his election was assured from the outset.

THE NATIONAL NURSERYMAN,
Rochester, N. Y.

Herewith I send you a money order for one year's subscription, because I want to stay on your list.

Glenview, Ill., Box 4.

MAX MIERISCH.

Our Book Table

THE MAN IN SHADOW, by Richard Washburn Child. Mac Millan Co., 66 5th Ave., New York City. \$1.25 net.

A new book containing numerous short stories which are exceedingly good.

LANDSCAPE GARDENING, OR HOW TO LAY OUT A GARDEN. 7½ x 5¼. 292 pages. Illustrated. Edward Kemp, edited and revised by F. A. Waugh. Fourth edition. John Wiley & Sons.

For many years Kemp's book on how to lay out a garden has been in continual use as a text book in American colleges where instruction in landscape gardening is offered. The book now comes to us revised and adapted to American conditions by Professor Waugh of the Massachusetts Agricultural College. It stands as a combination of the practical and theoretical. It is an exceedingly useful work, and its attractiveness has been much increased by the addition of several half tones, introduced by the editor.

A MANUAL OF PRACTICAL FARMING. John McLennan. 5 x 8½. 298 pages, illustrated. Published by The MacMillan Company, New York, 1910. Price \$1.50.

No better adjective can be used in describing this book than the one included in the title, "practical," for the author has endeavored in the simplest terms to place before the reader who is not acquainted with the technical expressions connected with the science of agriculture a means of assistance in the ordinary problems of farming. A glance here and there at the text will show its value, especially to the beginner. The volume is divided into three parts: Part I treats of various farming matters; Part II is devoted to the subject of animal husbandry, and the last division, of but two chapters, deals with the orchard and gives suggestions on other topics. Among the chapter heads are the following: Preparing the Soil, Application of Fertilizers; The Root System of Field Crops; Corn and How to Grow It; and Crop Rotation.

AMONG SCHOOL GARDENS. M. Louise Greene. Published by the New York Charities Publication Committee, 1911. Illustrated. 5¼ x 8. 388 pages. Price, postpaid, \$1.25.

It is only within a few years that school gardening has been taken up and recognized as an important part of the education of children, alike in the city and in the country. In some places the work was started for the purpose of inciting a love for outdoor life with its many activities and interests. Again, other promoters of the movement realized that with the fuller all round development afforded in this way, not only are the powers of observation stimulated, but the standard of the mental work performed in the school house is raised.

Miss Greene began to take interest in school gardening work at a time when there was little available literature on the subject of the sort that would help prepare persons to give instruction in the work. The present book is the more valuable, no doubt, because the material contained therein is drawn so largely from actual work or observation on the part of the author. It is lavishly illustrated, and the different phases of the work are described as they are carried on in the places which have been most forward and most successful in the establishment of school gardens. The appendices form a valuable part of the book, containing, in the first place, tables and planting plans; secondly, quotations from recognized authorities on the value of school gardens; and finally, an extensive bibliography of the subject.

FLORIDA GREEN ORANGES

A strong stand is being taken by leading Florida growers and shipping organizations against the practice of shipping immature fruit. The Florida Citrus Exchange decries the practice, and is making an effort to wipe it out altogether. They are properly of the opinion that the shipment of immature fruit is an exceedingly shortsighted policy, and is bound to react injuriously against the credit and reputation of the Florida citrus industry.

MISSISSIPPI NURSERYMEN ORGANIZE

On October 18, 1911, a number of the nurserymen of Mississippi met at Meridian, Mississippi, and organized The Mississippi Nurserymen's Association. J. R. Woodham, Newton, Miss., at whose call the nurserymen had gathered, was elected president for the coming year. W. A. Woods, Tomnolen, Miss., was elected vice-president and R. W. Harned, Agricultural College, Miss., was elected secretary-treasurer. Among the reasons for this organization are the following: It will enable the nurserymen to become personally acquainted with each other and promote business relations between each other. By organization they can better protect themselves against unscrupulous dealers, agents and others. They can do more in trying to get proper laws passed by the legislature. They can probably get a reduction from the excessive freight rates for nursery stock if they present their claims as a body before the railroad commission. The various nursery problems will be discussed at the annual meetings and all will be benefitted by the experience of others.

It was decided to hold the next annual meeting at Gulfport, Miss., at the same time as the National Nut Growers' Association meets there in the fall of 1912. Many of our members will desire to attend the Nut Growers meeting and will be able to attend both. We will also be able to take advantage of the lower railroad rates that will be offered at that time to the other organization. It is to be hoped that every nurseryman in the state will take advantage of the opportunity of joining this association and that all will endeavor to make it a success. The secretary will be glad to hear from any who are interested in the matter.

R. W. HARNED, Sec.-Treas.

Nursery managers wanted: Two attractive positions are offered in this issue. We know from personal knowledge that these offerings are good ones.

The business office of THE NATIONAL NURSERYMAN is in receipt of a box of Apples, which bear the name "Delicious." They are truly grateful to Stark Bros. Nurseries and Orchards Co., of Louisiana, Mo., for these. These Delicious Apples are by all means rightly named as the taste and appearances implies.

"We find THE NATIONAL NURSERYMAN one of our very best advertising mediums and expect to use considerable space this coming season as we have just bought \$4,250.00 worth of fine nursery soil and will enlarge our operations very materially. Shall not forget the grand old NURSERYMAN."

Pekin, Ind.

GRAY'S NURSERY.

James McHutchison of McHutchison & Co., 17 Murray St., New York City, called on his customers in Rochester in the middle part of November, at which time he was on his annual trip at this time of year to visit the florists and seedsmen as far west at St. Paul, Minnesota, and Indianapolis, Ind. He reports a \$40,000.00 increase so far this year over any other season.

Mr. McHutchison represents the following firms: Vincent Lebreton Nurseries, Angers, France; Schaum & Van Tol, Boskoop, Holland; Union Nurseries, Oudenbosch, Holland; Arthur De Meyer, Ghent, Belgium; August Bitterhoff Sons, Berlin, Germany; and Royal Tottenham Nurseries, Dedemsvaart, Holland.

Catalogues Received

Huntsville Wholesale Nurseries, Huntsville, Ala. Price list, November, 1911.

Leedle Floral Co., Springfield, Ohio. Fall, 1911, classified wholesale price list of roses.

Holsinger Bros., Rosedale, Kans. The New Raspberry Black Pearl. E. Turbat & Co., 67, 69, Route d'Olivet, Orleans, France. Wholesale list of roses and nursery stock, autumn, 1911, spring, 1912.

Walter Charles Slocock, Woking, Surrey, England. Wholesale catalogue, 1911 and 1912.

W. Fromow & Sons, The Nurseries, Windlesham, Surrey, England. Wholesale catalogue, 1911-1912.

Harrison's Nurseries, Berlin, Md. Price list of fruit trees, ornamentals, etc. "How to Plant About the Country Home."

Thomas Meehan & Sons, Germantown, Philadelphia, Pa. Meehans' Specialties, Autumn, 1911.

T. V. Munson & Son, Denison, Texas. Catalogue of fruit trees, vines, roses, etc., 1911 and 1912.

Luther Burbank, Santa Rosa, Cal. Burbank's Twentieth Century Gladiolus Bulbs, 1911-1912.

Establissement "Labelliflos," Voorschoten, Hollande. Price list of ornamentals.

The Ottawa Nurseries, Woodroffe, Ontario. Herbert Raspberry.

Vincent Lebreton's Nurseries, La-Pyramide-Trélazé, France. Wholesale trade list for autumn, 1911, and spring, 1912.

The Elm City Nursery Co., New Haven, Conn. Fall Planting card.

The Globe Nurseries, Bristol, Tenn. Surplus list.

The American Forestry Company, S. Framingham, Mass. Wholesale price list.

R. C. Notcutt, Woodbridge, England. Special Trade offer of surplus nursery stock.

W. & T. Samson and John Dykes, Kilmarnock, N. B. Nursery trade list.

Stark Bros. Nurseries and Orchards Co., Louisiana, Mo. "Scions."

Geo. Jackman & Son, Woking, England. Wholesale catalogue of plants.

H. Merryweather & Sons, Southwell, England. Trade list of Ornamental Trees, fruit trees, Roses, Shrubs, Climbing plants, etc.

Stark Bros., Nurseries and Orchards Company, Louisiana, Mo. Trade list.

Hicks Nursery, Westbury, N. Y. Special Fall list.

Kelway & Son, Langport, Somerset, England. Wholesale Catalogue of Gladioli.

David W. Thomson, Edinburgh, Scotland. Trade list.

R. W. Proctor & Sons, Chesterfield, England. Special trade offer of Ornamental Trees and Shrubs, Roses, Ivies and Perennials.

Turkey Creek Nurseries, Macclenny, Fla. Descriptive catalogue. Neat and attractive and illustrated with a number of colored plates.

Arrowfield Nurseries, Petersburg, Va. "Nut Trees."

J. B. Pilkington, Portland, Ore. Tree Shrubs, Vines, and Plants. This is no doubt the most elaborate catalogue which has been issued by a Pacific coast nurseryman, and which has come under our attention.

Charles Stewart, Westmoors, England. Special offer to the trade.

Buch & Hermanson, Krupunderm, Halstenbek, Germany. Trade list of Nursery Stock.

Matthew W. Smith, Darley Dale, Derbyshire, England. Trade list of Nursery Stock.

Alexander Cross & Sons Ltd., Glasgow, Scotland. Trade list offering Plant food.

Kent & Brydon, Darlington, England. Special trade offer of 1912. Specialties.

John Jefferies & Son Ltd., Cirencester, England. Trade offer.

Pennell & Sons, Lincoln, England. Trade list Flowering shrubs, Evergreen, etc.

S. Bide & Sons, Farnham, England. Trade catalogue of Hardy ornamental trees, Roses, etc.

F. W. Kelsey Nursery Co., Broadway, N. Y. Special wholesale prices of Trees, Shrubs and all hardy plants.

Buyl Freres, Cherscamp, Belgium. General Catalogue.

MOVING BIG TREES

The December issue of *The Garden Magazine* presents an interesting article on moving big trees in winter by W. C. McCollom. The writer has great faith in the frozen ball method, having, in fact, never lost a tree in moving in that way. When transplanting a maple tree of twelve inch caliper, Mr. McCollom allowed a six foot ball of earth to remain about the roots. This was done by cutting downwards to get a ball of desired size, then leaving it for a night or two to freeze thoroughly, so that upon cutting under the tree as much as practicable the ball would remain firm. The tree was then tilted slightly from different directions, meantime filling the hole with earth to raise the tree. When level with the grade, a stone boat was shoved under, after tilting the tree backwards.

In doing this work, it is well to have the tree fastened to the stone boat in the following manner, to prevent the possibility of its being jarred off by a jerk in starting; have one end of a stout rope tied around the tree near the top, with the other end fastened to the clevis at the front of the stone boat; also have two other ropes fastened near the top, which can be held by a man at each side. The hole to receive the tree should have been previously prepared, being made wider than the ball of earth, and being about two-thirds refilled with the earth taken from the bottom. In moving a tree in this way, drive it right over the hole and release the stone boat by tilting the tree, and proceed with the planting in the usual way. The bark should be covered with burlap wherever ropes are to be used. It is well to protect the trunk from sun scald during the first season by binding with straw.

ALABAMA STATE HORTICULTURAL SOCIETY ANNOUNCEMENT

The Ninth Annual Meeting of the Alabama State Horticultural Society will be held in Jasper, Ala., on January 25th, 26th, and 27th, 1912. This meeting will be of great interest to the fruit and vegetable growers of the State as several new features have been arranged. Several large spray pump machinery companies have signified their intention of demonstrating their outfits. There will be demonstrations in pruning and setting of fruit trees. Many excellent speakers will be on the program which will be announced later.

A Committee is actively engaged in arranging with the railroad companies to have a special rate for the occasion. The result will be announced when the program appears.

Jasper is in the center of a rapidly growing fruit section and a very large attendance is expected from that vicinity. The citizens of the town extend their hospitality to all in attendance. The hotel accommodations are excellent and the meetings will be held in the spacious new Court House. The town is situated in Walker County about 30 miles north of Birmingham on both the Frisco and Southern railroads.

Papers will be read on every phase of Alabama horticulture, such as Fruit Growing, Pruning, Spraying, Harvesting and Marketing; Vegetable growing; Insects; etc.

For further particulars address the Secretary at Auburn, Ala.

P. F. WILLIAMS, Secretary.

TENNESSEE FRUIT GROWERS AND NURSERYMEN IN SESSION

Secretary:

I give you herewith the preliminary announcements of the annual conventions of the Nurserymen, Fruit Growers, and Bee Keepers of this State. The programs of these conventions will be out in a short time and copies will be sent to you.

The State Horticultural Society will meet at Nashville, January 25, 1912. Secretary and Treasurer, C. A. Keffer, Knoxville.

The State Nurserymen's Association will meet at Nashville, January 26, 1912. Secretary and Treasurer, G. M. Bentley, Knoxville.

The State Bee Keepers will meet at Nashville, January 27, 1912. Secretary and Treasurer, J. M. Buchanan, Franklin.

I would thank you for mentioning these conventions in the columns of your paper.

Thanking you in advance for the courtesy, I am,

Sincerely yours,

G. M. BENTLEY,

Sec. and Treas. of the State Nurserymen's Association.

LAWN GRASSES

Farmers' Bulletin 469 gives the results of nine years' experiments with lawn grasses in South Carolina by C. C. Newman. He found that Kentucky blue grass, Bermuda grass, herd's grass, and white clover are the kinds suited for permanent lawns in that locality. The land upon which the experiments were made was well fertilized, plowed, and harrowed before the seed was sown, and in March of each year 75 pounds of nitrate of soda were applied per acre.

A combination of Kentucky blue grass and Bermuda grass is well suited to partially shaded lawns. The former, which likes the shade, is more abundant near large trees, while the Bermuda grass, which thrives where there is a great deal of sunlight, will predominate in the open. These two grasses are perennials. The same is true of orchard grass and red clover, which together are desirable for use on large lawns about country homes. They will grow from 18 to 24 inches tall and produce two crops of hay each season.

PIETRO C. ROSSI

It is with sincere regret that we announce to our members news of the sudden death of Mr. P. C. Rossi, President of the Italian-Swiss Colony, and one of the honored vice-presidents of this Association. This sad event, which was the result of a distressing accident, occurred at Asti, California, October 8th. As we are informed, Mr. Rossi was thrown out of his carriage and survived only a few hours.

Mr. Rossi was born in the city of Turin, Italy, 56 years ago. After leaving the grammar school, he went to the University of Turin, from which he graduated with honors in 1875. A few years later he decided to come to this country, and went to San Francisco, California. Shortly after the organization of the Italian-Swiss Colony in 1881, Mr. Rossi became interested, and was elected president and general manager.

In the death of Mr. P. C. Rossi, the whole American wine industry has lost one of its most aggressive and enterprising members, and in a business way, he leaves a place which it will be difficult to fill.

Mr. Rossi, at the time of his death, was in full health and vigor and in the midst of his many enterprises. He is survived by a widow and ten children, to whom are extended our sympathies in their great loss.

W. E. HILDRETH, President,

L. J. VANCE, Secretary.

Representing American Wine Growers' Association.

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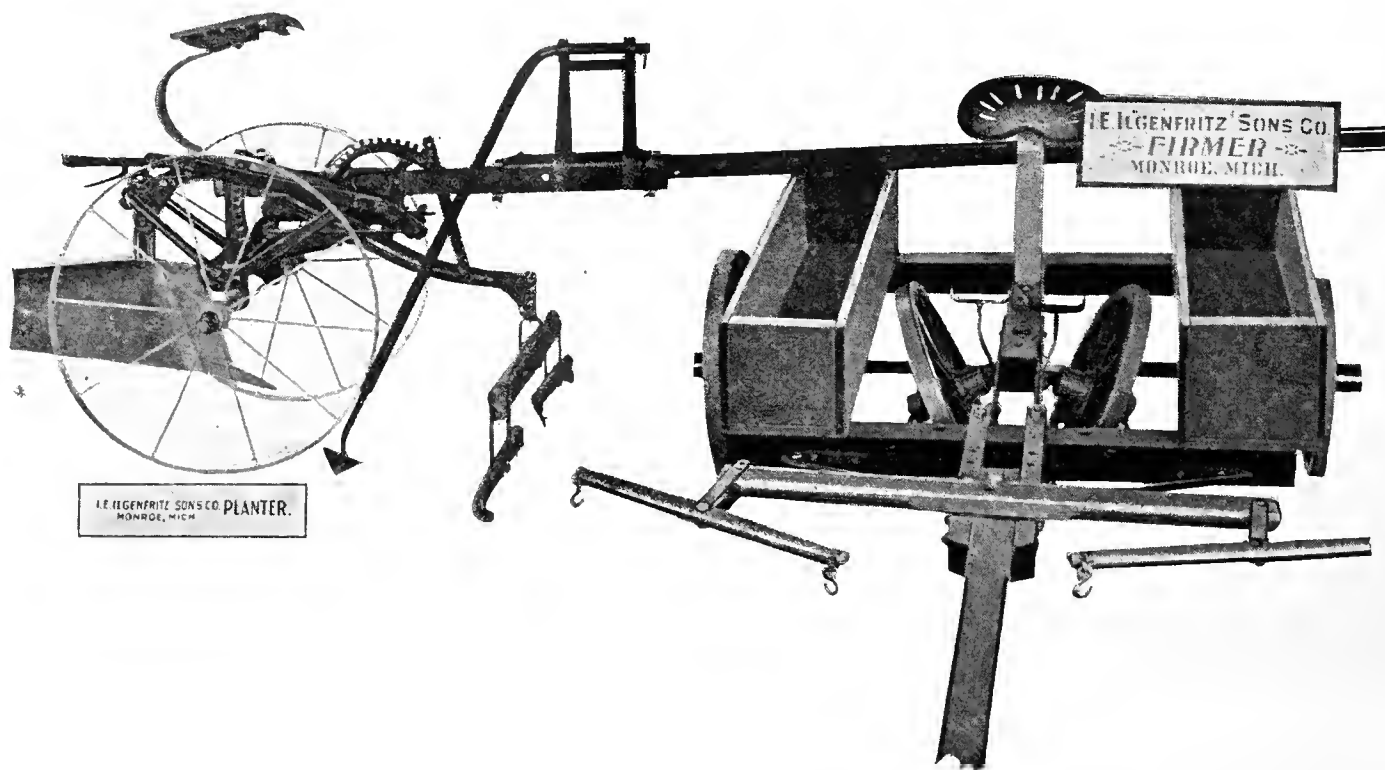


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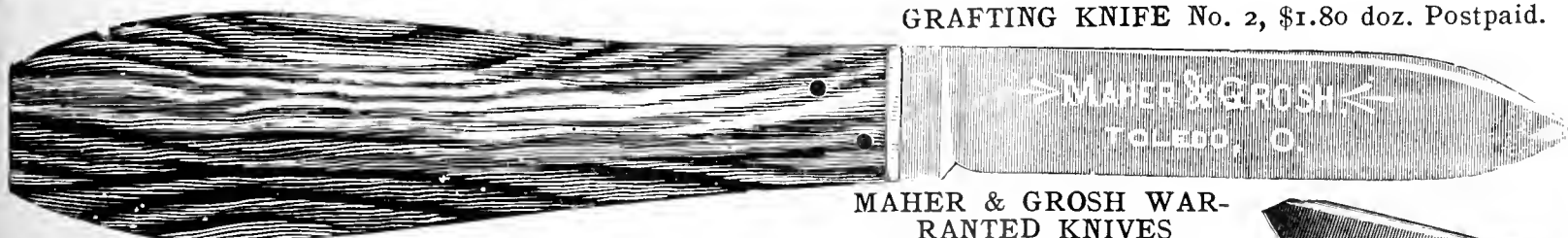
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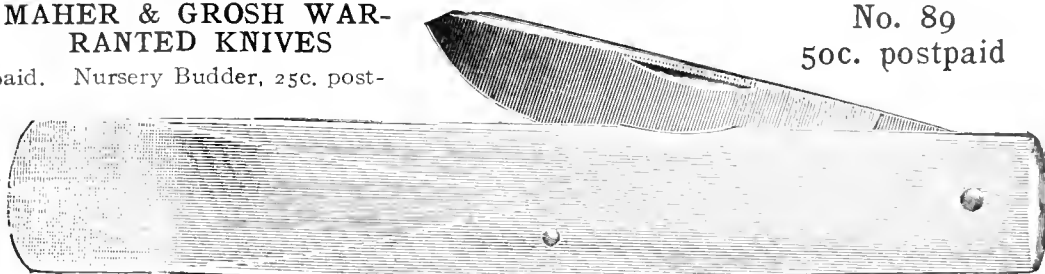
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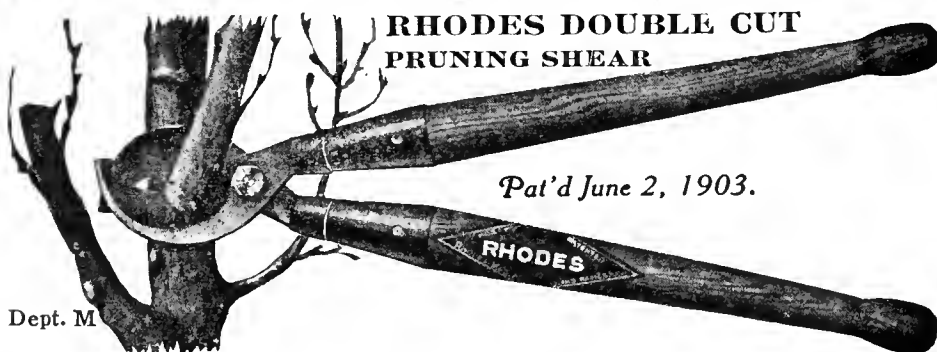
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APPLE—1 and 2 year; heavy on York Im-
perial, Stayman's Winesap, Grimes Golden,
Rome Beauty, and other standard varieties
in 1 year old.

PEACH—General assortment.

CHERRY—1, 2 and 3 year; some heavy trees.

PEAR—STANDARD, Kieffer, 1 year.

ASPARAGUS—1 and 2 year.

CALIFORNIA PRIVET—1, 2 and 3 year, in
carload lots—fine.

ORIENTAL PLANES.

CAROLINA POPLARS.

NORWAY and SILVER MAPLES.

RHUBARB—1 and 2 year.

We also have a general line of other stock. Send
us your WANT LIST. We need your orders.

We want PEACH SEED (NATURALS).

Buy Early for Fall Orders

THE GRIFFING NURSERIES

Will have the most complete stock of trees and plants to
offer from their

FLORIDA AND TEXAS NURSERIES

For delivery season 1911-12 ever offered in the South

We Can Probably Supply Your Wants

Budded Pecans, Japanese Persimmons, Figs, Musca-
dine Grapes, Satsuma and other Hardy Oranges,
Grape Fruit and Kumquats, Mulberries, Non-sprout-
ing Grafted Roses, Crape Myrtle, Biota Aurea
Nana and other Conifers, Eucalyptus and Camphor
Trees are a few of our leaders.

A complete assortment of Fruit, Nut, Ornamental Trees
and Shrubbery.

THE

Griffing Brothers Company

General Sales Office, JACKSONVILLE, FLA.

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(ENGLISH GROWN)

OVER HALF A MILLION
TO SELECT FROM

APPLES: Maidens, Bushes and Half-Standards are a leading feature with us. 250,000 in stock.

PLUMS AND PEARS. Enormous stock in leading kinds.

CHERRIES, Peaches, Nectarines and Apricots in heavy quantities.

Fruit Trees are our leading line.

Inspection invited to nurserymen visiting England. Our nurseries are only ten miles by rail from London.

List of varieties grown and quotations sent on application. We have no agents. Write direct to

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**Fruit Tree Growers and Nurserymen
HOUNSLOW, ENGLAND**

Seedling and Transplanted Evergreens by the million

Arbor Vitae
Austrian Pine
Black Hill Spruce
Colo. Blue Spruce
Concolor
Engelmanii Spruce

Jack Pine
Norway Spruce
Pinus Ponderosa
Scotch Pine
White Pine
White Spruce

We have these in all sizes and ages. Also a general line of nursery stock.

Evergreen price list now ready.

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NURSERY COMPANY**

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Thousands of people are buying Himalaya Berry plants from me; thousands more, who buy other things from you, also will buy Himalaya plants from you if you can make sure they are getting the genuine, hardy stock grown by Mitting.

I INTRODUCED HIMALAYA BERRY AND AM A BERRY SPECIALIST

No other grower produces Berry plants only; many grow them extensively, but I am the only nurseryman who gives his attention exclusively to Berries. You can supply my Himalaya plants and my other leaders—Gooseberries, Currants, Raspberries, King Edward Strawberries—with absolute assurance to your customers that you're supplying genuine stock, right from the producer's own place.

My big retail trade is going to take the major part of my stock, but I can wholesale a limited quantity of choice plants—I burn all other kinds. Write for prices now. Make your reservations early. First come, first served, and with Himalaya especially, there is a tremendous demand that is going to exhaust the supply before the season is over.

**Berrydale Experiment
Gardens,** NATIONAL AVE
HOLLAND, MICH.



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What Customer Wouldn't Be Pleased With Grape Vines Like These! Grown by Us, and Sold to a Customer in Michigan.

Concord and Moore's Early Grape (2- and 3-year), Cherry, Kieffer Pear, Norway Maple, Norway Spruce, Koster's Blue Spruce, Etc.

Your year-by-year sales are the foundation of your business. First-class stock and four-square business methods make pleased customers, and pleased customers, in turn, are the solid bed-rock of trade.

The select nursery stock that we offer is indicated only in very small part by the following list—but each of these items is strictly first-class, clean, healthy stock, grading up to size, all culls thrown out and burned. In this kind of stock we are building up a bigger business every year, exactly the same sort is here for you and your trade. It will mean better profits, and better-satisfied customers for you to handle Harrison's trees.

We're ready to talk business. Get particulars and prices; send in list of your requirements for estimate.

Following is a partial list of our surplus trees, plants and shrubs unsold on November 25, 1911. It is here offered subject to prior sale. Write for prices—if what you want is not listed here, write us anyway; we can probably supply you.

APPLE 2 YR.		6 to 7 ft.	5 to 6 ft.	4 to 5 ft.	3 to 4 ft.
		11-16 in.	5-8-11 in.	1-2-3-8 in.	1-2 in.
Ben Davis	500	2000			
C. R. June	50	200	200	100	100
Cooper's Market	50	100	100	100	100
Coffelt Beauty	50	100	100	50	50
Early Harvest	50	500	200	200	200
Ensee		100	200	200	100
Fourth of July	50	100	100	100	100
Gano	100	100	100	500	500
Ingram		150	150	50	
Late Raspberry		100	100	100	100
Lankford	50	50	50	50	50
Mann		100	100	100	100
Missouri Pippin	100	200	200	200	100
Myrich	100	300	300	100	
Opalescent		200	100	100	100
Paynes' Late Keeper		100	200	100	100
Red Astrachan	200	1000	1000	1000	
Salome	50	100	100	100	100
Scott Winter		100	100	100	100
Senator		100	50	50	
Smyth's Cider		100	100	50	50
Springdale		100	100	100	100
Spitzenburg			200	200	200
Stark	100	500	500	500	500
Walbridge			100	100	100
Winesap		200	200	200	200
Yellow Transparent	100	1000	1000	1000	1000

WHOLESALE SURPLUS LIST

APPLE 1 YR.		5 to 6 ft.	4 to 5 ft.	3 to 4 ft.	2 to 3 ft.
Aiken Red	100	100			
Alexander	100	100	100	100	
A. G. Russett	1,000	1,000	100	100	
Baldwin	12,000	14,000	1,000	1,000	
Ben Davis	12,000	2,000	2,000	1,000	
C. R. June	200	200	200	200	
Duchess		1,000	1,000	1,000	
Early Harvest	2,000	2,000	500	500	
Fallowater	1,300	300	300	100	
Gano	1,000	2,000	1,000	1,000	
Golden Sweet	200	100	100	100	
Golden Beauty	500	500	500	500	
King	500	500	500	200	
Mann	200	200	100		
Missouri Pippin	200	200	100	100	

WHOLESALE SURPLUS LIST—Continued

APPLE 1 YR.		5 to 6 ft.	4 to 5 ft.	3 to 4 ft.	2 to 3 ft.
N. W. Greening	500	500	500	500	
Nero	5,000	3,000	1,000	1,000	
P. W. Sweet	200	200	200	200	
Red Astrachan	8,000	4,000	1,000	1,500	
R. I. Greening	2,000	2,000	1,000	500	
Smith Cider	200	200	200	200	
Spitzenburg	1,000	1,000	1,000	1,000	
Stark	12,000	4,000	1,000	1,000	
Sweet Bough	100	100	100	100	
Talman Sweet	200	200	100	100	
Winesap	2,000	5,000	5,000	5,000	
Winter Banana	500	500	500	500	
Yellow Transparent	5,000	5,000	2,000	2,000	
York Imperial	2,000	2,000	2,000	1,000	

PEACH

		5 to 6 ft.	4 to 5 ft.	3 to 4 ft.	2 to 3 ft.	1 to 2 ft.
Bray's Rare Ripe	50	100	100	100	100	
Belle Georgia	1,000	1,000	1,000	1,000	1,000	
Connetts	200	200	200	200	200	
Denton	200	200	200	200	200	
Elberta	3,000	3,000	3,000	3,000	3,000	
Fitzgerald	100	100	100	100	100	
Fox Seedling	200	200	200	200	200	
Harrison Cling	200	100	100	100	100	
Heileys	200	200	200	200	200	
Krummels	200	200	200	200	200	
Levy's Late	100	100	100	100	100	
Mt. Rose	200	200	200	200	200	
Moore's Favorite	200	200	200	200	200	
McCollister	100	100	100	100	100	
Niagara	100	100	100	100	100	
Piquetts	100	100	100	100	100	
Prize	100	100	100	100	100	
Salway	200	200	200	200	200	
Stephens R. R.	200	200	200	200	200	
Stump	200	200	200	200	200	
Slappy	100	100	100	100	100	
Triumph	100	100	100	100	100	
W. H. Cling	100	100	100	100	100	

PEAR

		1 in.	6 to 7 ft.	5 to 6 ft.
Kieffer Pear	1,000		3,000	3,000

CHERRY

		5 to 6 ft.	4 to 5 ft.	3 to 4 ft.	2 to 3 ft.
Baldwin	100	100	100	50	50
Black Tartarian	500	300	100		
Belle De Choisey	50	50			
Early Richmond	1,000	1,000	1,000	1,000	
Governor Wood	500	300	100	50	
Napoleon	200	200	100		
Yellow Spanish	100	100	100		

GRAPES, 2 YR. TRANSPLANTED
25,000 Concord 20,000 Moore's Early

TWO YEAR ASPARAGUS CROWNS
Choice Plants.

CALIFORNIA PRIVET

1,000	7 to 8 feet	10,000	2 to 3 feet
1,000	6 to 7 feet	20,000	18 to 24 inches
5,000	5 to 6 feet	25,000	12 to 18 inches
10,000	4 to 5 feet	10,000	6 to 12 inches
20,000	3 to 4 feet.		

TREES AND SHRUBS

AMERICAN ELM
50 8 to 10 feet high, 1 1/4 inches
500 6 to 7 feet high, 1 inch

NORWAY MAPLE
50 12 feet high, 2 inches
25 12 feet high, 3 inches
1,000 10 feet high, 1/2 inch
2,000 8 to 10 feet high, 1 1/4 inches
2,000 6 to 7 feet high, 1 inch

AMERICAN LINDEN
50 8 to 10 feet high, 1 1/4 inches
50 6 to 7 feet high, 1 inch

SILVER MAPLE
200 4 inches
200 3 inches
500 12 feet high, 2 inches
1,000 10 feet high, 1 1/2 inches
1,000 8 to 10 feet high, 1 1/4 inches
1,000 6 to 7 feet high, 1 inch

BOX ELDER
500 8 to 10 feet high, 1 1/4 inches
1,000 6 to 7 feet high, 1 inch

MILLIONS OF STRAWBERRY PLANTS.

ABOUT FIFTY LEADING VARIETIES.

SUBMIT US YOUR WANT LIST.

Boxing, Baling, etc., etc.

All quotations are for immediate acceptance, subject to stock being sold and without liability to us should injury befall the stock from frost, hail, fire or other causes beyond our control.

Harrison's Nurseries
J. G. HARRISON & SONS PROPRIETORS
BERLIN MARYLAND



THE NATIONAL NURSEYMAN



JANUARY, 1912

Published Monthly at Rochester, N.Y., U. S. A., in Behalf of the Trade Interests of Nurserymen, Seedsmen and Plant Growers in General.

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PINES, BOX BUSH. A general collection
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ALSO

NORWAY MAPLES, PIN OAKS, IBOTA
PRIVET, SPIRAEA VAN HOUTTEI
by the thousand.

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APPLE SEEDLINGS, fine stock of No. 1,
Straight and Branched Roots.

APPLE GRAFTS, Whole and Piece Root
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POPLARS, Carolina and Norway Surplus, of all
sizes, including a fine lot of yearlings.

A Full Line of General Nursery Stock
for Wholesale Trade.

Always pleased to quote prices.

ASK for Winter TRADE LIST now ready.

1,000,000 POPLAR

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Poplar, Box Elder, Soft Maple and other hardy shelter
belt stock to be found in the country.

A fine stock of **ONE-YEAR APPLE**, said to be one
of the best stands in the country this year, McIntosh,
Jonathan, Rome Beauty, etc., etc.

Write us for prices on carload lots.

The Jewell Nursery Co.

LAKE CITY, MINNESOTA

Established 1868

1500 Acres

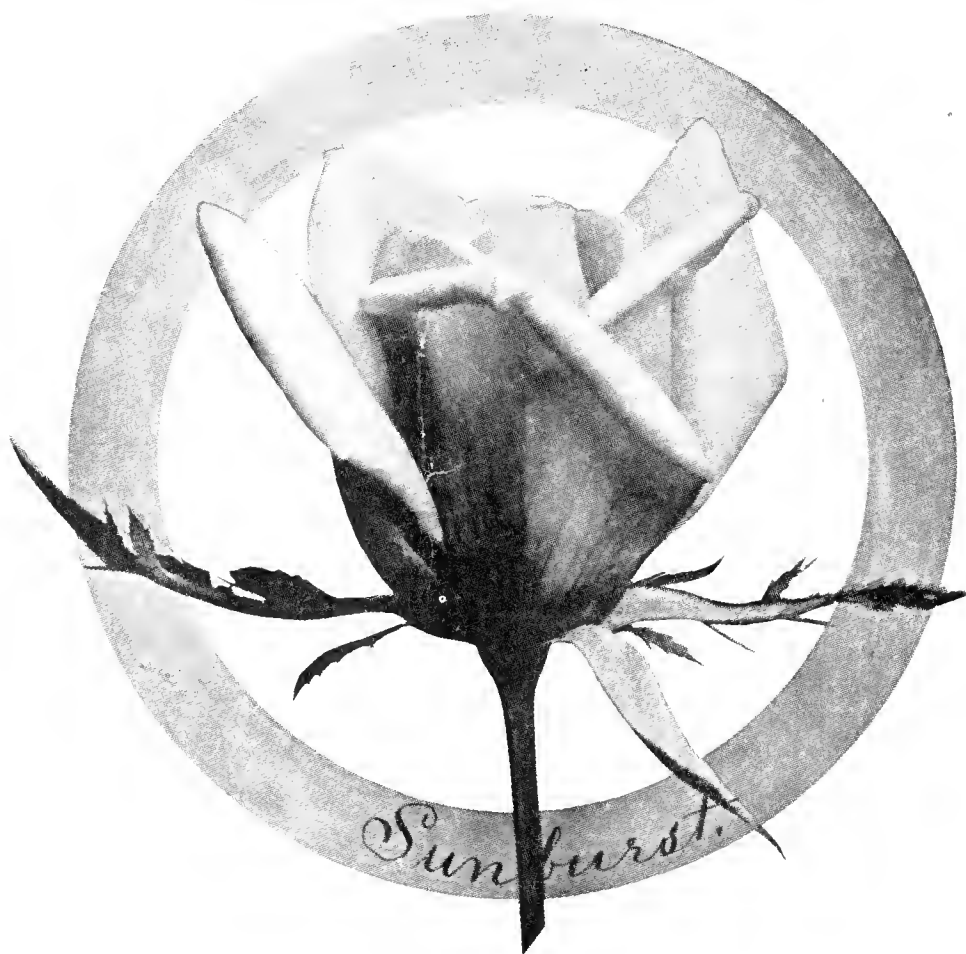
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Clean

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Thoroughly Established

Our Roses lead in quality of stock and excellence of variety, having been selected from the very best of the newer bedders, which added to the choicest of standard sorts, gives an ideal assortment especially suited to lining out.



Summer Propagated, Winter Rested Roses

Send us your list early and allow us to make
you quotations.

THE E. G. HILL CO., Richmond, Ind.

NURSERYMEN AND FLORISTS

looking for stock can find largest assortment in the
United States at the

Painesville Nurseries

Fruit and Nut Trees, Deciduous Trees, Shrubs and Evergreens, Hardy Roses, Vines and
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and other tender Greenhouse Plants

Have a large stock stored in frost proof cellars that can be shipped at any time desired;
switch from N. Y. C. lines direct into our packing house; can load without exposure.
Unsurpassed facilities for handling orders large or small. Catalogs and price lists free.

A few specials while they last:

STANDARD PEARS in assortment DUCHESSE DWARF PEARS BOURGEAT QUINCE
PRUNUS PISSARDI and TRILOBA CUTHBERT AND OTHER RASPBERRIES
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Our Specialties are: Roses, H. P. Moss, Ramblers, Climbers, etc., Peaches, Pears, Plums, Cherries,
Ornamental Trees and Shrubs in car lots, Weeping Mulberries, Elm and Ash,
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No Trouble to Price your List of Wants 55 Years 1200 Acres 44 Greenhouses

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ELMS...

SPLENDID TREES

Sizes one to two inches caliper

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APPLE QUINCE PEAR CHERRY
PEACH PLUM

A Fine Block of
Own Root Roses

ORNAMENTAL TREES SHRUBS
BERRIES CLEMATIS
EVERGREENS PEONIES PHLOX
PYRAMIDAL and STANDARD
TREE BOX, 3 to 6 feet

Write for our Special Prices

Special Attention given to Dealers, complete lists
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63 Years

700 Acres

Magnolia Grandiflora

Nothing can compare among broad-leaved evergreens with the beauty of foliage and flowers of our Southern Magnolia. Magnificent, large white flowers from the middle of April until August. Hardy at Philadelphia. 25,000 pot and field grown plants, all with finely branched roots, no better stock in America. Write for prices.



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It pays you to have stock of such high quality as Berckman's Southern-grown trees and plants. We ship all over America and to many foreign points. Northern nursery stock cannot approach the splendid vigorous growth—the demands of our customers prove this.

PEACH TREES. All finest commercial sorts; absolutely true to name and free from disease. No cheap, inferior trees sold. All sizes. **ENGLISH WALNUT TREES.** Excellent quality. All size trees. **AUCUBAS.** Choice grown stock; best variety; all sizes of bushy and well-branched plants. **AZALEA INDICA.** 15,000 home-grown plants and plenty of imported stock. **OLEA FRAGRANS.** A most desirable, fragrant, flowering shrub for Southern gardens and Northern florists. **MAGNOLIA FUSCATA.** Various sizes in field grown and pot plants. **HEDGE PLANTS:** We have a large stock of **CITRUS TRIFOLIATA** and **AMOR RIVER PRIVET (TRUE).** **CONIFERS** of special merit: **BIOTA AUREA NANA** (Berckman's Dwarf Golden Arborvitea), **B. CONSPICUA**, **B. JAPONICA FILIFORMIS**, **CUPRESSUS LAWSONIANA**, **C. PYRAMIDALIS** and **RETINOSPORA**.

We have the largest and most varied collection of Conifers in the South. A fine assortment of large specimens for immediate display. Write for prices on any of the above stock. Get our trade list and descriptive catalogue telling about our full line of Ornamentals, Fruits and Nuts. Your trade will appreciate the quality of Berckmans' stock. Real trade builders.

P. J. BERCKMANS CO., Inc., Fruitland Nurseries
Established 1856
Over 450 Acres in Nurseries
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FOREST TREES FRUIT STOCKS

Shipments of over 160 Million of
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The Best Tree Digger on Earth



Used and Recommended by Leading
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The one we have used for years and by far the most satisfactory of any we have ever seen. It does exactly the work for which it was designed and does it right. If interested we will be glad to send description and prices.

Stark Bros. Nursery & Orchards Co.

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C. M. HOBBS & SONS

BRIDGEPORT, IND.

APPLE—1, 2 and 3 year in leading sorts.

CHERRY—1 and 2 year fine stock.

PEAR—1 and 2 year in leading sorts.

PLUM—1 and 2 year Japan, European and native sorts.

PEACH—1 year leading sorts.

PRIVET—1 and 2 year fine stock.

SHADE TREES in car load lots Norway Maple, American Elm, Box Elder, Silver Maple, etc.

We also have a general line of other stock not mentioned above.

WANT LISTS INVITED.

Jonathan

Gano

Ben Davis

AND OTHER LEADING SORTS IN CARLOAD.

Fine assortment of Apple in 2-year Grafts and 1-year Buds

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KIEFFER-GARBER, and assorted pear in all grades.

A carload of $\frac{3}{4}$ foot, 2-year, California Privet at a bargain. This is a fine lot.

TEXAS UMBRELLA TREE--

CATALPA SPECIOSA,

in large quantity, 4 to 6, 6 to 8, 8 to 10.

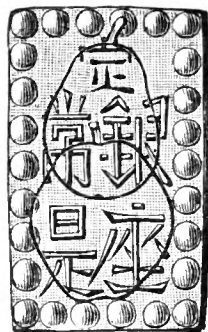
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WAXAHACHIE NURSERY CO.

J. R. MAYHEW, President

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SPECIALTIES

APPLES—Commercial varieties, one year, in large supply. As fine in quality as ever grown.

PEARS—Kieffers, one and two years old. A much smaller crop than heretofore.

CHERRIES—On Mazzard. One year. Bing, Lambert, Napoleon, Black Tartarian.

CHERRIES—On Mahaleb. One and two years. Ea. Richmond, Dyehouse, Montmorency, Wragg, Royal Duke, in small supply.

PEACHES—We excel in Peaches, and of these we will have as fine a stock as we have ever grown, both in one year and June Buds.

ROSES—Budded. We will have a large and fine stock of leading Hybrid Perpetuals and Mosses grown at Huntsville.

PRIVET—Amoor River. Retains its foliage longer and holds its color better than California Privet.

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This stock is especially adapted to the most severe usage, being thoroughly waterproof & weather-proof. "Once used, always used."

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FRENCH CRAB APPLE SEED

The last report from our collector of French Crab Apple Seed was very encouraging, and while we cannot promise definitely still we are pretty certain we will get the full amount of seed we have ordered. Under these circumstances we can now offer a limited supply of the best French Crab Apple Seed procurable, crop of 1911. The germinating quality of our seed is acknowledged by growers as the best.

Prices on application. Crab Apple Seed is scarce and in demand. You should order at once.

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| ROSES, in all kinds and varieties | PALMS and BAY TREES by the thousands |
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| BOXWOOD, in all shapes, forms and sizes | SMALL FRUIT, in all kinds and varieties |
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300 varieties of Conifers, 1 to 4 years old.
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1600 varieties of New and Old Ornamental Trees & Shrubs in all Sizes.
250 varieties of Climbing Plants.
400 varieties of Conifers, 1 to 4 feet high.
400 varieties of Perennials.
800 varieties of New and Old Roses.

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This book is designed to serve as a substantial reference book and is the result of special experience in the study of the practical aspects of plant pathology. There is a comprehensive discussion of the chief fungous diseases of cultivated and familiar plants.

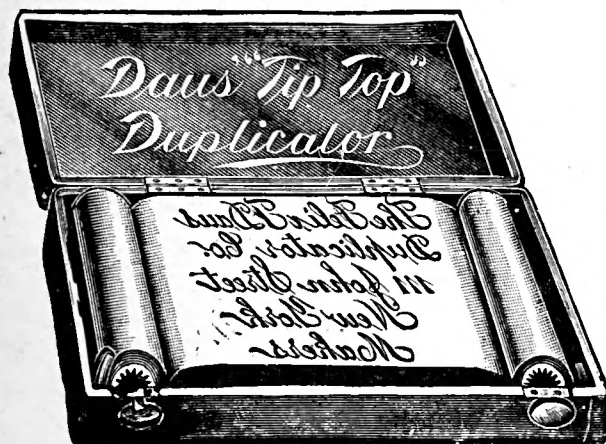
Each disease is discussed with reference to its occurrence, the nature of the lesions or processes induced, the structure, life history, and cultural relations of the causal fungus, and practical methods for prevention or control.

The literature of the subject is freely cited, and a host index provides a ready reference to all of the important fungous diseases occurring upon any host. The method of treatment followed is intended to facilitate and stimulate the work of the nurseryman and practical fruit grower and to enlarge the interests of the general reader. The book is very fully illustrated from photographs and from drawings especially made for this work.

8 vo. 508 pages, Illustrated. \$2.40. Trade Edition.

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